ODICAL ROOM
RAL LIBRARY
Y. OF MICH.

The EDUCATIONAL RECORD

SIXTH EDUCATIONAL CONFERENCE

NEW YORK CITY

October 28 and 29, 1937

Under the auspices of

The Committee on Measurement and Guidance
of the American Council on Education
The Commission on the Relation of School and College
of the Progressive Education Association
The Cooperative Test Service
The Educational Records Bureau

SUPPLEMENT NUMBER 11
JANUARY 1938

THE AMERICAN COUNCIL ON EDUCATION

The EDUCATIONAL RECORD

VOL. XIX SUPP. NO. 11

JANUARY
1938

COPYRIGHT, 1938, THE AMERICAN COUNCIL ON EDUCATION

AMERICAN COUNCIL ON EDUCATION

1937-38

OFFICERS

CHAIRMAN: Edward C. Elliott, president of Purdue University

FIRST VICE CHAIRMAN: Eugene R. Smith, headmaster of the Beaver Country Day School, representing the Progressive Education Association

SECOND VICE CHAIRMAN: Guy E. Snavely, executive secretary of the Association of American Colleges, representing the Association of Urban Universities

SECRETARY: E. O. Melby, dean of the School of Education, Northwestern University

TREASURER: Corcoran Thom, president of the American Security and Trust Company, Washington, D. C.

EXECUTIVE COMMITTEE:

The Chairman and the Secretary of the American Council on Education

For three years: Samuel P. Capen, chancellor of the University of Buffalo, representing the Association of American Colleges; Raymond A. Kent, president of the University of Louisville

For two years: Shelton Phelps, president of Winthrop College; Louis R. Wilson, dean of the Graduate Library School, University of Chicago, representing the American Library Association

For one year: Sidney B. Hall, state superintendent of public instruction of Virginia, representing the National Education Association; Kathryn McHale, representing the American Association of University Women

Ex officio: John W. Studebaker, United States Commissioner of Education

EXECUTIVE OFFICERS

PRESIDENT: George F. Zook
PRESIDENT EMERITUS: C. R. Mann
VICE PRESIDENT: C. S. Marsh
ASSISTANT TO THE PRESIDENT: Donald J. Shank
CHIEF ACCOUNTANT: Grace R. Ontrich

Published Quarterly by
THE AMERICAN COUNCIL ON EDUCATION
744 Jackson Place, Washington, D. C.

50 CENTS A COPY $2.00 A YEAR

Entered as second-class matter June 8, 1932, at the Post Office at Washington, D. C., under the Act of August 24, 1912

The Educational Record

January 1938

CLARENCE STEPHEN MARSH, *Editor*

CONTENTS

CONTRIBUTORS TO THIS ISSUE 4

THE 1937 EDUCATIONAL CONFERENCE: A REVIEW *Joseph K. Atkins* 5

THE CONFERENCE PROGRAM 19

PREPARING STUDENTS FOR COLLEGE *Wilford M. Aikin* 22

INDIVIDUALIZATION IN THE ANTIOCH PROGRAM *A. D. Henderson* 38

PUTTING THE TESTS TO WORK *Max McConn* 56

DISCIPLINARY VALUES IN INDIVIDUALIZED EDUCATION *B. R. Buckingham* 74

THE NATURE AND EXTENT OF THE READING PROBLEM IN AMERICAN EDUCATION *William S. Gray* 87

DIAGNOSTIC AND REMEDIAL PROCEDURES IN READING *Marion Monroe* 105

BASES FOR A NEW METHOD OF ACCREDITING SECONDARY SCHOOLS *Walter C. Eells* 114

SEVENTH ANNUAL MEETING OF INSTITUTIONAL MEMBERS OF THE EDUCATIONAL RECORDS BUREAU: COMMITTEE REPORTS 143

SYMPOSIUM: EXPERIENCES OF SCHOOLS HOLDING MEMBERSHIP IN THE EDUCATIONAL RECORDS BUREAU 153

AN INVESTIGATION OF WHAT EDUCATES AT THE COLLEGE LEVEL *Constance Warren* 153

INDIVIDUALIZING THE CURRICULUM *George A. Walton* 160

A REMEDIAL READING EXPERIMENT *Howard V. Funk* 166

IDENTIFYING PATTERNS OF ABILITY *Richard G. Sagebeer* 172

A TENTATIVE ADMISSIONS POLICY *Frank D. Ashburn* 179

Contributors to This Issue

WILFORD M. AIKIN is professor of education at the Ohio State University and chairman of the Commission on the Relation of School and College of the Progressive Education Association. The Eight Year Study conducted by this organization has been directly under his leadership.

FRANK D. ASHBURN has been headmaster of the Brooks School in North Andover, Massachusetts, since its organization in 1927. He is a graduate of Yale University.

JOSEPH K. ATKINS, formerly a teacher of English and mathematics in public and private schools of New England, is now a writer of technical and educational articles and of fiction. He is on the part-time staff of the Educational Records Bureau.

B. R. BUCKINGHAM, before becoming an editor for Ginn and Company, Boston, several years ago, was a leader in educational research. The schools and universities with which he has been associated include the New York City public schools, the University of Illinois, Ohio State University, and the Harvard Graduate School of Education.

WALTER C. EELLS has for the past four years been coordinator of the Cooperative Study of Secondary School Standards which was organized in August, 1933, to work toward the development of better methods of accrediting secondary schools. Dr. Eells was formerly professor of education at Stanford University, and is a leading student and writer on the Junior College Movement.

HOWARD V. FUNK has been principal of the Bronxville Junior High School, Bronxville, New York, for the past eight years. Before going to Bronxville twelve years ago, he taught school in Wisconsin and in Winnetka, Illinois. He is a graduate of the University of Wisconsin.

WILLIAM S. GRAY has been professor of education at the University of Chicago since 1921. From 1917 to 1931 he was dean at the University. He is the author of many books, monographs, and articles on reading, and is a frequent contributor to professional magazines.

A. D. HENDERSON has been president of Antioch College in Yellow Springs, Ohio, since 1936. He was formerly dean of the college and helped to introduce their unique program of individual educational guidance.

MAX MCCONN has been dean of Lehigh University since 1923. He was formerly associated with the University of Illinois. He has written numerous articles, many of which have appeared in THE EDUCATIONAL RECORD, and is the author of a number of books on education.

MARION MONROE is specialist in remedial instruction for the Pittsburgh public schools. She was formerly research psychologist for the Institute for Juvenile Research and Behavior Research Fund. She has devoted most of her study to the problems of remedial reading in the elementary school, and is the author of a series of widely used diagnostic tests in reading, as well as several books on remedial reading.

RICHARD G. SAGEBEER is an instructor in mathematics and biology at the Tower Hill School in Wilmington, Delaware.

GEORGE A. WALTON, a graduate of the University of Pennsylvania, has been principal of the George School in Pennsylvania since 1912. He has long been recognized as a leader in the progressive movement.

CONSTANCE WARREN has been president of Sarah Lawrence College in Bronxville, New York, since 1929. Following a number of years' experience as a teacher of history in various secondary schools throughout the country, she served as head of the History Department at Dana Hall and Pine Manor in Wellesley, Massachusetts. In 1928-29 she was head of Pine Manor.

The Educational Record

January 1938

The 1937 Educational Conference: A Review

By JOSEPH K. ATKINS

THE somewhat dramatic tendency to perceive Great Divides in human affairs at the end of certain periods of time appears to be universal. It is not surprising, therefore, that the educational conference which convened at the Hotel Roosevelt in New York this year in the month that marked the tenth anniversary of the Educational Records Bureau was characterized by something of the spirit of a celebration. Speakers and listeners alike looked both backward and forward, over the accomplishments of the Bureau in the past and into the fields which it, with the other sponsors of the conference, hopes to enter in the future.

The general theme of the conference was precisely the subject which, as Dean McConn of Lehigh University pointed out in his review of the history of the Educational Records Bureau, originally called the Bureau into existence and has ever since so largely motivated its work and that of the other sponsoring organizations: Individualizing Education. The conference had to do with the problem, as Dean Hawkes of Columbia said at the dinner meeting, of "learning enough about the individual pupil to guide his educational efforts wisely." "The assumption that what leaves the teacher is

identical with what enters each student," Dean Hawkes continued, "is as far from the truth as anything can be." It was recognition of this problem, and concern with this task, which drew the conferees together.

That the subject was no chance selection, drawn out of the air by accident or unguided inspiration, was evident from the extraordinary number of men and women from all varieties of schools and other educational organizations who gathered to discuss it and hear it discussed. Instead of the six hundred who had made the preceding annual conference seem so hugely attended, nearly a thousand school people from thirty-two states and the District of Columbia registered this year. Of this total, about a third came from independent schools, almost as many from public schools, and a fifth from colleges and universities.

As for several years past, the conference was held in conjunction with the regular annual meeting of the institutional members of the Educational Records Bureau. The organizations besides the Bureau which were its sponsors are the Committee on Measurement and Guidance of the American Council on Education; the Cooperative Test Service, also of the Council; and the Commission on the Relation of School and College, of the Progressive Education Association. The community of interest shared by these organizations is implicit in their mere names; but the most striking evidence is the unanimously enthusiastic response accorded to all the papers, regardless of their organizational origin.

Individual taste, need, and readiness differ so markedly among the listeners to any varied gathering of speakers that to describe any one paper in a group as more remarkable or more stimulating than another would reveal more about the commentator than about the paper. It is no invidious comparison, however, to record the reaction of the entire conference to one speaker on this year's program and his offering. President Conant of Harvard, speaking off the record and from bare notes, made all those who attended the dinner at which he spoke his debtors for the candor, the charm, and the

stimulation of his address. Under the extemporaneously devised title of "A Sceptical Chemist Becomes a Troubled Educator," President Conant presented the case of the conscientious educator who is ready and willing to offer individual education to each student but is dissatisfied with the instruments available for the purpose. It is a matter for lasting regret that more school people were not able to share the privilege of hearing him and that every school person cannot read a transcript of the talk. The paper was never formally prepared for publication, however, and to attempt a summary would be to do injustice to an occasion of which the most precious quality was spontaneity, and to mute the overtones which gave it memorability.

One of the speakers scheduled in the program graciously gave up his allotment of time in order to permit more extended discussion of other papers. Dr. Wood's address on "The Need for Comparable Measurements in Individualizing Education" is therefore promised for next year's conference, a fact which goes far to diminish the regret felt by all those in attendance at their inability to hear it this year.

Allan V. Heely, headmaster of the Lawrenceville School, opened the conference by introducing the chairman of the Commission on the Relation of School and College, Wilford M. Aikin, whose address had the seemingly mild title, "Preparing Students for College." Professor Aikin pointed out, however, that preparing students for college is a vastly more complicated undertaking than preparing them merely for college entrance, since it involves the multifarious tasks of equipping them to get the full potential values from their experience after entering. Whereas the secondary school formerly considered its job done and its responsibility ended for its students when it had somehow succeeded in getting them over the initial hurdle of entrance examinations, now those schools which regard their work with seriousness and in its social setting maintain a continuing interest in the progress of their students all the way through to their establishment in adult life as individuals and as citizens of a democracy. The teleo-

logical bases of secondary education are, therefore, undergoing searching re-examination and drastic revision, tending at present toward a more realistic preparation of students for life, whether the next stage in their respective lives be college or industry. To accomplish such a purpose, the school must know its students individually and must adapt its methods to the newer aims. In those schools where this view of education determines practice, pupils are being led into continuous experience throughout the school years instead of being permitted to gather units of credit haphazardly. In the schools of the Eight Year Study now being conducted by the Progressive Education Association there is emphasis upon integration or fusion of subject matter where that seems profitable, since it is believed that each field of study takes on added meaning for the student when he sees the significance of that field in relation to others. Concurrently with these developments in methods, curriculum, and administration, there is also going on a study and restatement of the nature, values, and requirements of democracy, so that means will be adapted to ends, rather than ends determined by means.

President Henderson described and illustrated the methods used at Antioch College to treat each student as an individual. Besides utilizing the already well-known cooperative work-and-study program, involving alternate periods of about three months each in classes and on a real job (as distinguished from the "odd jobs" held by occasional students in many colleges), Antioch demands intimate knowledge of the physical condition, financial status, vocational plans, academic achievement, and personal development of every student. A continuous record of each student is kept from the time he enters until he is graduated, on forms devised at the college, and a system of advising has been worked out which enables the student to obtain mature counsel on any aspect of his academic or personal career. In exceptional cases the adviser takes the initiative in offering help when a student gives evidence of being deeply entangled in difficulties; the usual procedure, however, is to await the student's request for assistance. The

student body is expected to govern itself as to details of behavior, though faculty advice and, when needed, faculty authority are available. The governing principle in admitting a student is the question of whether, taking his entire known history into account, he appears able to carry the Antioch program with probable benefit to himself. It sometimes happens, under this principle, that a boy or girl is admitted who has not had the advantage of a complete secondary schooling. Maturity and self-directive power are the qualities sought and worked toward in the students.

William S. Learned of the Carnegie Foundation for the Advancement of Teaching presided at the luncheon meeting on the first day and, commenting on both the "gropings" and the "fruitful achievements" of the Bureau throughout its first decade of work, charmingly gave to the occasion the semblance of a birthday party.

Dean McConn, introduced by Dr. Learned as the "insidest outsider" having any relation with the Educational Records Bureau, reviewed the history of the testing movement, with special emphasis upon the part played in it by the Educational Records Bureau. There was, he recalled, a plethora of testing material and testing ideas and hopes, ten years ago, but a rather smaller amount of clear understanding of the uses, values, and limitations of tests and measurements. Indeed, by 1927 a definite reaction against the high optimism of the early post-war period had set in, and a substantial section of informed opinion regarded tests as greatly overrated tools of the educational process. Plainly, the time had come for proponents of tests and measurements to demonstrate that they could be used for practical and worthwhile purposes, or to admit that they were merely another fad. The American Council on Education set up its Committee on Personnel Methods in 1926; the Carnegie Foundation's Pennsylvania Study went into operation in 1928; the first state-wide testing programs occurred in the Middle West in 1927 and 1928; and the Educational Records Bureau was founded in the fall of 1927. All four of these organizations and programs were engaged

in one purpose: "Putting the Tests to Work." The Educational Records Bureau undertook the special task of finding the most useful tests for elementary and secondary school pupils, of convincing school administrators of their value, and then of setting up permanent individual records of achievement and of aptitudes for the pupils of those schools which were ready to avail themselves of its services. Only four schools, that first autumn, risked their time, their money, and their energy in trying out the new scheme. That the Bureau had chosen a fruitful field for cultivation is indicated by the fact that in the fall of 1937 its membership had increased to 316 institutions. In spite of this enormous growth, and of the consequent temptation to become entangled in the merely technical details of the ever increasing mass of work involved, the Bureau has successfully retained a clear vision of its original purpose, namely, to find and use means for knowing as fully as possible each individual student, so that his education might be adapted to his own personality, his own needs, limitations, and aspirations.

Burton P. Fowler, headmaster of the Tower Hill School, introduced B. R. Buckingham, incisive educational thinker and for many years a leader in educational research, now of the editorial staff of Ginn and Company. Dr. Buckingham defended individualized education against the common charge of haphazardness and intellectual softness. He reminded his listeners that in psychological reality there can be no other kind of education than individualized; that learning is an individual process, even though more than one person may go through it simultaneously; and that, therefore, the contrast between individual and non-individual education is either no contrast at all, or else a distinction between good education and bad. Dr. Buckingham made it clear that he believed the disciplinary values with which his paper was concerned were certainly not to be gained by subjecting children to the lockstep of the graded school in which the chief aim of the administrators is to place obstacles in the way of a child's progress from one level to another. So far as grading has

value as a means of recognizing the facts of individual differences, it will proceed on the principle of promoting children not so much on the basis of what they have already learned at a given moment as on the basis of what they then need to learn. As for curriculum, he derided the idea that the traditional division of human knowledge into "subjects" was natural or even very useful for the purpose of transmitting that knowledge. Instead, he suggested a regrouping of subjects into functional units related to the actual lives of children and their elder contemporaries. A curriculum so organized would provide material for study over a long enough period of years to afford all the disciplinary values of a laboriously achieved mastery of any one of the traditional subjects. Moreover, these functional subjects would continue to be of lively interest to a student long after he had been graduated from school and college. Examples of such functional units are the concepts of production, of consumption, of communication, of recreation, and of the expression of aesthetic impulses. The organization of the learning process around such units of interest and immediate import would eliminate the greatest waste in education—the mere "taking" of subjects which are then effectually forgotten.

The morning of the second day of the conference was devoted to an examination of the subject of reading on all school levels. The chairman of the session, Stanley R. Yarnall of the Germantown Friends School, remarked upon the great interest shown in the subject as indicated by the large attendance at this session, and reminded the meeting that in the past ten years about twice as many studies in the field of reading have been published as in the preceding century. It is evident that school people are no longer taking for granted that children just naturally learn how to read; that with the increasing complexity of social organization has come a more urgent need for reading skill; and that school people are realizing their responsibility for producing intelligent readers. He then introduced William S. Gray of the University of Chicago.

Speaking on "The Nature and Extent of the Reading Prob-

lem in American Education," Professor Gray presented an arresting picture of the state of American proficiency in techniques of understanding, critical, and purposeful reading. The teaching of reading has been too nearly content with the production of simple skill in word recognition, with the result that children have grown up with the ability to pronounce more or less correctly the words in a sentence but gravely lacking in the ability to grasp clearly the meaning of a cogently developed thought. In studies conducted at the University of Chicago and other centers, a wide variety of deficiencies in reading skill have been uncovered among children at all grade levels. Defective readers may be roughly divided into those who possess serious deficiencies requiring minute and extended remedial treatment, and those who can read ordinary classroom material but with considerable difficulty. These two groups need different treatment and must not be confused. A study is now going on of how to attack the problems of these types of reading difficulty. More important still, Professor Gray stressed the need of guidance for all pupils if reading is to serve its broadest function as an instrument of intellectual development and social progress.

Marion Monroe, specialist in remedial instruction in the Pittsburgh Public Schools, described in considerable detail the methods in use in Pittsburgh for the prevention and treatment of reading difficulties. In each school there, a remedial teacher is usually assigned to conduct special reading classes for those children who are found by any of the standard reading tests to be below their grade level in achievement. According to the magnitude of the problem in any given school, the children who require special instruction are assigned either to reading "clubs" which meet daily or less often, or to a special reading home room in which the whole emphasis of the class work is upon the elimination of reading deficiency. Most important of all, much effort is now being expended upon the early discovery of reading difficulty, with a view to preventing the psychologically disruptive effect of long continued and uncorrected defects. In this work many specialists are coopera-

tively engaged, including not only the remedial reading teachers, but also—since reading difficulties may arise from such a variety of causes—psychologists, medical men, eye specialists, and others. The program has been in effect only long enough to convince the school administrators of its practical value, without as yet providing adequate statistical data to justify final conclusions as to the validity of every detail in the whole body of methods used.

Donald D. Durrell of Boston University, basing his paper upon the experiences of the Educational Clinic there, of which he is the director, described some means for "Classroom Provision for Individual Differences in Reading." He recommended a combination of logical common sense, intimate knowledge of each child's intellectual and emotional equipment and physical condition, and flexible adaptation of classroom procedure to the needs of each pupil. Regrettably, Dr. Durrell was prevented by circumstances wholly out of his control from preparing his talk for publication.

At the luncheon meeting, the Research Secretary of the College Entrance Examination Board, Carl C. Brigham of Princeton University, presented Walter C. Eells, coordinator of the Cooperative Study of Secondary School Standards.

Dr. Eells described the work of the Cooperative Study of Secondary School Standards in terms of the reason for its existence and of the principles under which it is carrying on its task. As all thoughtful school men have long been aware, the existing standards of accreditation for secondary schools, useful as they have been in stimulating improvement of secondary education in the past thirty-five years, have tended to become mechanical, rigid, narrowly academic, and somewhat antiquated, with the result that in recent years they have been deadening rather than stimulating. They have served a purpose, but they are no longer quite good enough. In attempting to set up new standards, the Study has been guided by a body of clearly defined principles, of which Dr. Eells enumerated eighteen. Some of the broader of these are as follows:

Methods of accreditation, as far as possible, should be based upon scientific studies and objective evidence, rather than upon untested assumptions and committee opinions. On the other hand, the considered judgment of competent educators is an essential factor in the evaluation of the quality and character of the work of a school. A valid method of accreditation will be one which has been tested and carefully evaluated by extensive experimental tryouts. A school should be judged in terms of the extent to which it meets the needs of all pupils enrolled in it, not alone of those who continue their formal education in college. It should be judged, too, by its progress between two different dates rather than solely by its status at a single date. The basis and methods of accreditation should be such as to require interest and participation in the process on the part of the entire professional staff of the school. And finally—or primarily—the function of accreditation by a state or regional association should be stimulation toward continuous growth and improvement, not merely inspection and admission to membership.

The speaker then showed a number of lantern slides illustrating some of the findings of the Study in regard to the present status of some two hundred schools throughout the country in several fields which are capable of being objectively measured, and promised that a full report would be ready for action after a few more months of study and organization of the material.

The printed conference program, a copy of which appears on the pages following this review, does not quite adequately indicate the nature of the proceedings of the second afternoon. To make them clear, it is necessary to refer to activities occurring on the evening prior to the formal opening of the conference. On Wednesday, October 27, the Committee on Tests and Measurements of the Educational Records Bureau met at half past four to review the work of the past year and to plan its next steps. The Board of Directors of the Bureau held its annual business meeting at five o'clock, and at six o'clock it had as its guests at supper the members of all the

Bureau committees. At this informal meeting Dean Hawkes, as chairman of the Board of Directors, expressed the gratitude of the Board and of the staff of the Bureau for the valuable support, interest, and practical help given by the committee members; and Hart Fessenden, of the Fessenden School, in behalf of the committee members, assured the Board of the genuine pleasure and profit derived from committee work by those he represented. At half past seven the Independent Schools Advisory Committee and the Committee on the Relation between Elementary and Secondary Schools met together while the Public Schools Advisory Committee was holding its meeting in another room.

The bulk of the actual business of the annual meeting of institutional members of the Educational Records Bureau was thus accomplished before the conference opened and only a brief oral report of the transactions of the various committees was given on Friday afternoon. The selection of new committee members and directors, the means by which the representative character of these bodies is maintained, had already been made by ballots distributed by mail to all institutional members of the Bureau.

The greater part of the afternoon session, presided over by Robert N. Hilkert of the Hill School, was devoted, as in previous years, to a number of descriptions of practical experiences of member schools. These accounts are always interesting, and should be of value as much to non-member institutions as to members. Unfortunately, however, it was impossible effectually to dispel the impression among non-members of the Bureau that this symposium was of interest exclusively or chiefly to members alone, and the meeting was consequently somewhat sparsely attended. Another year it is hoped that this misunderstanding can be avoided.

Constance Warren, president of Sarah Lawrence College, speaking on "An Investigation of What Educates at the College Level," described the hopes, misapprehensions, and partial successes of her newly gathered faculty when they began their task a few years ago of building *de novo* a college

for women. The most significant and universally applicable characteristic of the experience at Sarah Lawrence seems to be a frankly experimental approach to the study of the relations between personality and the learning process.

George A. Walton outlined in some detail the substance and operations of the "study-sequences" around which the curriculum at George School is built. These are groups of the traditional subjects so juxtaposed as to form logical, sequential, and realistically meaningful units of intellectual experience adapted to the varying needs of roughly differentiated types of minds. Their adoption has made it possible to offer individualized education to a high degree within the administrative framework of a school not seeking a reputation as extreme in its "progressivism."

Howard V. Funk, principal of the Bronxville, New York, Junior High School, reported the results of a carefully planned remedial attack upon reading deficiencies in his school. One of the more interesting tentative findings is that in a heterogeneous group of defective readers on the junior high school level, remedial procedures result in the greatest improvement among the children initially farthest below grade level, and the least gain among those initially least below standard. His interpretation of this phenomenon, pending the accumulation of more conclusive data, is that the less seriously handicapped readers are probably already working closer to the limits of their potential capacity than are the poorest readers.

Richard G. Sagebeer of Tower Hill School, in his paper, "Identifying Patterns of Ability," described the dangers of averaging part-scores and presented a plea for more accurate and representative means of recording scores on many-part tests such as the American Council Psychological Examination. He described, as non-technically as accuracy would allow, the statistical bases for a scoring method in which the unique characteristics in students' part-scores would be retained and in which the individual pattern or profile would be implicit. At the same time, he reported his own invention of

a machine for doing the necessary mathematical calculations.

Frank D. Ashburn, headmaster of the Brooks School, described "A Tentative Admissions Policy" presently in force at Brooks. His school prefers to admit boys only to the first or second form (seventh or eighth grade), since those who come later, it is felt, are likely to find adjustment difficult. Application is expected at least a year before the intended date of entrance, and a series of tests, including those of the Educational Records Bureau and the Secondary Education Board, is given to the applicant, either at Brooks or at his own currently attended school. Mr. Ashburn made it clear, however, that the opinion of the head of a school known to Brooks is given a special weight in making a final decision on accepting or rejecting an applicant. Cumulative records of a long history of achievement are, of course, regarded as especially significant and useful; some such objective basis for a decision is especially indispensable when a boy is coming from a school not well known to Brooks.

Officially, the story of the Sixth Educational Conference is closed at this point. The account would not be completely informative, however, if it did not contain reference to a meeting the next day which, although not formally a part of the conference, would not have been held if the conference had not already brought together in one place so many of the leaders in the guidance movement. Under the leadership of George F. Zook, president of the American Council on Education, the Council's Committee on Measurement and Guidance called together a number of representatives of state and national testing programs. Present were the leaders of fifteen state programs and representatives of the College Entrance Examination Board, the Progressive Education Association, the Cooperative Test Service, the Educational Records Bureau, and the sponsoring committee. Two representatives of the International Business Machines Corporation were also there, to discuss the new scoring machines and to answer questions about them. A portion of the meeting time was devoted to a discussion of machine-scoring

techniques, costs, and possible improvements. The state testing program leaders reported the status of their respective programs and outlined the difficulties they were facing. They reached three major conclusions pursuant to a memorandum prepared after the preceding year's meeting: Those conducting state testing programs must recognize that it is their responsibility to educate teachers and school administrators to a wiser and more effective use of test materials in dealing with the individual pupil; state programs should attempt to coordinate the activities of all agencies concerned in guidance within their respective areas; and a national coordinating agency, such as the Committee on Measurement and Guidance, is a definite necessity. In connection with the third conclusion a long list of activities which the committee should undertake had been drawn up last year, and this year's meeting reviewed its progress and made further plans for the future. Another meeting is scheduled for 1938 in conjunction with the Seventh Educational Conference.

As a whole, the conference this year may fairly be described as the solid expression of an interest no longer tentative, curious, nor local. The guidance movement—the effort toward "Individualizing Education"—is finding form and direction and developing a sense of power. This conference and the organizations sponsoring it are not the whole movement, of course; but there can be no doubt that together they occupy a place in the vanguard.

Sixth Educational Conference

Under the joint auspices of the Committee on Measurement and Guidance of the American Council on Education, The Commission on the Relation of School and College of the Progressive Education Association, The Cooperative Test Service, and The Educational Records Bureau, held in conjunction with the Seventh General Meeting of Institutional Members of the Educational Records Bureau, October 28th and 29th, 1937, The Roosevelt, New York.

Program—INDIVIDUALIZING EDUCATION

THURSDAY—OCTOBER 28

Registration—9:00 to 10:00 o'clock (*Mezzanine Gallery*)

THURSDAY MORNING SESSION

Ball Room—10:00 to 12:30 o'clock

Allan V. Heely, Headmaster of the Lawrenceville School, *Presiding*

(*Opportunity will be given for a brief discussion following each presentation*)

10:00 o'clock: "Preparing Students for College," Wilford M. Aikin, Professor of Education, Ohio State University, and Chairman of the Commission on the Relation of School and College

10:50 o'clock: "The Need for Comparable Measurements in Individualizing Education," Ben D. Wood, Columbia University, Director of the Cooperative Test Service and the Educational Records Bureau

11:40 o'clock: "Individualization in the Antioch Program," A. D. Henderson, President of Antioch College

THURSDAY LUNCHEON MEETING

Hendrick Hudson Room—1:00 to 2:45 o'clock

William S. Learned, Carnegie Foundation for the Advancement of Teaching, *Presiding*

"Putting the Tests to Work," Max McConn, Dean of Lehigh University

(*Discussion*)

THURSDAY AFTERNOON SESSION

Ball Room—3:00 to 5:00 o'clock

Burton P. Fowler, Headmaster of the Tower Hill School, *Presiding*

3:00 o'clock: "Disciplinary Values in Individualized Education," B. R. Buckingham, Editor for Ginn and Company

(*Discussion*)

4:00 o'clock: Informal question and answer session.

THURSDAY DINNER MEETING

Ball Room—7:45 o'clock

Herbert E. Hawkes, Dean of Columbia College, *Presiding*

Guest Speaker, James B. Conant, President of Harvard University

FRIDAY—OCTOBER 29

FRIDAY MORNING SESSION

Ball Room—10:00 to 12:30 o'clock

Stanley R. Yarnall, Headmaster of the Germantown Friends School, *Presiding*

(*Opportunity will be given for a brief discussion following each presentation*)

10:00 o'clock: "The Nature and Extent of the Reading Problem in American Education," William S. Gray, Professor of Education, The University of Chicago

10:50 o'clock: "Diagnostic and Remedial Procedures in Reading," Marion Monroe, Specialist in Remedial Instruction, Pittsburgh Public Schools

11:40 o'clock: "Classroom Provision for Individual Differences in Reading," Donald D. Durrell, Professor of Education and Director of the Educational Clinic, Boston University

FRIDAY LUNCHEON MEETING

Hendrik Hudson Room—1:00 to 2:45 o'clock

Carl C. Brigham, Princeton University, Research Secretary of the College Entrance Examination Board, *Presiding*

"Bases for a New Method of Accrediting Secondary Schools," Walter C. Eells, Coordinator of the Cooperative Study of Secondary School Standards

(*Discussion*)

FRIDAY AFTERNOON SESSION

Ball Room—3:00 to 5:00 o'clock

Robert N. Hilkert, The Hill School, *Presiding*

3:00 o'clock: Seventh Annual Meeting of Institutional Members of the Educational Records Bureau. All conference guests are cordially invited to attend.

Committee Reports:

Independent Schools Advisory Committee, Robert N. Hilkert, The Hill School

Public Schools Advisory Committee, Albert B. Meredith, New York University

Committee on School and College Relations, Eugene R. Smith, The Beaver Country Day School

Committee on Relations Between Elementary and Secondary Schools, Charles B. Weld, The Taft School

Committee on Tests and Measurements, John A. Lester, Friends Council on Education

General Business

3:30 o'clock

Symposium: A discussion of the experiences of schools holding membership in the Educational Records Bureau. Contributions will be made by the following:

Constance Warren, President of Sarah Lawrence College, "An Investigation of What Educates at the College Level"

George A. Walton, Principal of the George School, "Individualizing the Curriculum"

Howard V. Funk, Principal of Bronxville Junior High School, "A Remedial Reading Experiment"

Richard G. Sagebeer, Tower Hill School, "Identifying Patterns of Ability"

Frank D. Ashburn, Headmaster of the Brooks School, "A Tentative Admissions Policy"

Preparing Students for College

By WILFORD M. AIKIN

IT SHOULD be noted in the beginning that my topic is "Preparing Students for College." It is not "Preparing Students for College *Entrance*." There is a difference. A candidate might be able to meet entrance requirements, but be inadequately equipped to take advantage of the opportunities which come to him in college. Because the very life of many schools is dependent upon securing admission of candidates, there is a tendency to overemphasize mere getting in at the expense of intelligent, clear-sighted understanding of the work to be done and the life to be lived after the beginning of college experience. Many look carefully at the college gates to see how they can be opened, but seldom explore the rich field beyond the gates to discover what it may yield.

As my topic stands, it implies another emphasis which is not in my mind. The implication is that it is the school's business to take the student in hand and put him through a course of training without much regard for his major concerns and long-distance purposes. The topic might more adequately be stated this way: "Helping *each* student to prepare himself to obtain the best possible development during the next four years of formal school life."

I should like to underscore the word "each" in the suggested restatement of my topic—"Helping *each* student." It seems to me that there can be no one complete set of secondary school experiences of equal value to all students as they attempt to prepare themselves for college. Doubtless there are needs common to all which should lead to a certain measure of common experience, but individual differences in capacity, background, outlook, character, and purpose require a variety of experience and a flexibility of organization which do not yet characterize many of our schools.

We should recognize, also, that the word "college" connotes many different kinds of institutions. Students from high school enter directly colleges of agriculture, engineering, education, and many others, as well as liberal arts colleges. However, for the purpose of our discussion this morning, we should confine our attention to the liberal arts college. But that is no longer a well-defined entity; fifty years ago it was. Then the bachelor's degree from almost any American college meant substantially the same body of knowledge, the same skills, and to a considerable extent the same outlook upon life. Fifty years ago the liberal arts college was also relatively static; now it is undergoing tremendous change along with the whole structure of our society. Therefore, our problem becomes this: "How may we in the secondary schools help many different kinds of young people prepare themselves for four years more of school life best suited to the needs of each one?" It is no simple task.

It seems to me that it requires first of all that the secondary school should have full knowledge of the colleges to which its students go and of the changes now under way in them; second, effective cooperation between school and college as the student transfers from one to the other; and the task demands, further, that the secondary school should really know each one of its students, his capacities, his tendencies, and his purposes.

Some of our older schools which have been sending students for many years to nearby colleges probably know those institutions well. Frequent contact with college officers and professors over a long period may have equipped a few secondary schools with sufficient knowledge of the possibilities in the institutions of higher education to which they send students; but for the vast majority of our secondary schools this is not the case. The situation calls for much more intimate association between representatives of the secondary schools and representatives of the colleges. High school principals and teachers should have opportunity for frequent visits to the colleges for considerable periods of time, and many college

teachers as well as administrators should spend time in our secondary schools. We have found in the work of the Commission on the Relation of School and College that mutual profit comes from frequent round-table discussions involving representatives from both institutions.

The most serious break in the continuity of the student's educational experience comes at the transfer from school to college. The school has the obligation of providing for the college full and abundant significant information so that the college may select its students wisely and guide them intelligently after they are admitted. Recognizing this responsibility, we have a committee, of which Eugene R. Smith is chairman, which is seeking to discover what information the college needs, how that information can be secured by the schools, and the manner in which it should be presented to the colleges. We hope to be able to discover how to provide the college all necessary pertinent information concerning the candidate, and at the same time leave the school free to adapt its work more effectively to the needs of individual students.

The third task may be more difficult: "How can our high schools know each student well?" In the small school it may be more easily possible, but in our large high schools the difficulties are very great.

There are several steps which some schools are now taking. First, administrative arrangements make it possible for each teacher or counselor to have continuous contacts with a student or group of students over a period of at least two years. This longer period of association gives more complete knowledge and understanding of each individual.

Second, intelligent use of available tests of various kinds enables the schools to secure more complete information concerning the individual's capacities, tendencies, skills, and accomplishments.

Third, the development of new types of evaluation instruments now going on in connection with the Eight Year Study, under Ralph W. Tyler's direction, is extending the areas of school experience in which we can secure more accurate

information. These new instruments of evaluation are applicable to areas such as interests and attitudes, work habits and study skills, abilities involved in interpreting data, abilities involved in applying facts and principles to concrete situations, and sensitivity to significant social problems These newer measures of growth in important areas of experience are being used now experimentally in the thirty schools included in the Eight Year Study and in many other schools as well. As their value and practicability are demonstrated through use, we may expect their adoption generally by secondary schools.

Fourth, a boy or girl may reveal a quality of character, an attitude, in a spontaneous act or utterance on the playground, in the corridor, at the luncheon table, which could seldom, if ever, be discovered in the classroom or by any test which we may hope to have. It seems to me, therefore, that teachers should train themselves to be alert to observe significant incidents and to record them. Such records of observation made by many teachers, covering a period of years, should add much to our knowledge and understanding.

Information accumulated in these various ways should then be used as intelligently as possible by our secondary schools in helping students prepare themselves for college.

The unfortunate fact, however, is that even in schools where such information has been accumulated it is seldom used effectively. One of the reasons, I think, is that many of our secondary school teachers are so engrossed in helping students obtain a certain body of knowledge, or develop a certain degree of skill, that they do not concern themselves with other aspects of individual growth and development. Another is the lack of time to study the members of their classes as human beings. Still another reason for failure to use accumulated information is its inaccessibility. It may be filed away where those who should use it cannot get to it readily and promptly. It seems to me that the secondary school administrator has the inescapable responsibility of securing abundant significant information about the members

of his school, leading teachers to recognize its importance, and providing time and opportunity for them to use it efficiently.

Let us assume for our purpose this morning that the secondary school is thoroughly and intimately acquainted with the colleges to which its students go and that it has collected and is using wisely abundant, pertinent information concerning its pupils. What, then, should it do?

As most of you know, the thirty schools included in the study now being conducted by the Commission on the Relation of School and College have been struggling with that problem for four years. They were given permission by the colleges and universities to do what they think best for their students. When this opportunity came to the schools they were elated. "Now," they said, "no one is telling us what we *must* do; we are free, and we rejoice in our freedom!" But that rejoicing soon gave way to a feeling of profound responsibility and perplexity. They discovered that they were facing a task much more difficult than that of meeting requirements prescribed by higher institutions. Each school undertook in its own way serious study of the needs of its students and thoughtful attempts to meet them. This led to many different kinds of change in organization, curriculum, and procedures.

Three years ago I reported to this conference that we could note certain tendencies of change more or less in evidence in all of the schools in the direction of greater continuity, better integration, more vital subject matter, more satisfactory adaptation to individual capacity, needs, and interests.

Another analysis made last year reveals changes in administration, curriculum, and methods of teaching. The heads of our schools have become more and more concerned with the major problems of education. Administration is assuming its proper place as a means of achieving our educational goals rather than an end in itself. Teachers are participating more fully, cooperating with administrators and with each other in planning work, sharing teaching responsibilities, and in critical evaluation of the results of their own work. Artificial

barriers separating teachers from each other are being removed. Greater continuity of teacher and student relationship is to be observed in many of our schools; there is provision for more complete and effective study of individual students by frequent use of tests which have been found to be valuable; by keeping and using fuller and more significant records over a period of years; by closer contact with parents, securing reports of parental experience with the student, and counseling with parents concerning his problems; by the use of records which include reports of significant incidents in the life of the student observed by the teachers in the classroom, in the assembly, on the playground, in committee rooms, wherever the teacher has an opportuniy to note spontaneous student behavior; and by more intelligent use of significant knowledge about pupils for purposes of guidance.

The schools are providing more opportunity for students to follow lines of special interest and for individuals to develop projects initiated by themselves, sometimes within groups, sometimes entirely outside of any class or other school organization. Everywhere there is greater use of the community, in the school and out of the school. There is a tendency to lengthen the school day, to make the program of the day more flexible, with longer uninterrupted periods. The administration of our schools has moved definitely towards friendlier relations and closer cooperation with the colleges. In all of the schools there is an expanded program of evaluation.

The chief curriculum developments which thus far have emerged are: greater emphasis upon contemporary civilizations, especially our own; greater continuity of student experience in several fields of work. The most marked change in curriculum organization is in the direction of integration, correlation, orchestration of subjects. There is the elimination of content of doubtful value from the traditional subjects and the substitution therefor of new content which seems to be more significant. Fields of study new to the secondary school are finding their way into some of our schools, and all the schools are stimulating the creative impulses of pupils and

giving more opportunity for expression in various forms. The student is taking a larger share in planning individual and group work. Instead of learning the next pages, he undertakes, under guidance, the investigation of a topic or the performance of an experiment. He learns how to use books and laboratories and other materials for a purpose; how to plan an investigation; how to carry it through; and how to draw conclusions and report them to his group.

There is evidence to indicate that some of these changes, at any rate, are in the right direction; but we have not been satisfied. It has seemed to many of us that we must think more deeply into the problems of the secondary school than we did in the early years of our study. It became increasingly clear that the bases of our thinking, not only in school but in college as well, must be found in *the needs of youth in a democratic society*. We were forced to ask ourselves anew these two questions: "What are the fundamental urges, drives, concerns, of young people?" and "What are the elements of democracy?"

At this point we have received real help from another commission of the Progressive Education Association—the Commission on the Secondary School Curriculum—under the chairmanship of V. T. Thayer. One of their committees has been conducting an extensive and thorough investigation into the needs of young people, and another has made an analysis of the democratic ideal. The report begins with a statement of the purpose of general education:

> *The purpose of general education is to provide rich and meaningful experiences in the basic aspects of living, so directed as to promote the fullest possible realization of personal potentialities, and the most effective participation in a democratic society.*
>
> By "rich and meaningful experiences" we mean activities that are designed to involve the interests of the individual and to meet his needs. We are not, of course, proposing a curriculum based upon the notion that the adolescent is always conscious of his needs and that therefore it is only necessary to permit him to do as he pleases. What we propose is to study the adolescent in the manifold relationships of life, and to

formulate a program which is consistent with what can be learned about his development, the intellectual-emotional factors involved in his behavior, his interest and needs, and the environmental forces operating upon him.

The Basic Aspects of Living

The term "rich and meaningful experiences" takes an additional meaning for the teacher when we consider the nature of the involvements of the American youth as he seeks to secure orientation in our complex interdependent society. He is born into a world which is characterized by "blooming, buzzing confusion." His task is to weave unity and consistency into life. Where should the teacher turn for materials which will help in this task?

The Committee has found it helpful in this connection to think of the involvements of youth in terms of four basic aspects of living, as follows: (1) Personal Living, (2) Immediate Personal-Social Relationships, (3) Social-Civic Relationships, and (4) Economic Relationships.

Personal Living

In proposing this category, the Committee has no intention to consider the individual apart from his environment. To attempt to do so would, of course, be absurd. But as the individual interacts with his environment he develops as a person. He is a growing organism that steadily develops unique characteristics which mark him off from other organisms. He develops intellectual interests, defines and satisfies his needs, attempts to weave consistency and unity into his life, develops appreciations, formulates a philosophy of life which determines his social relationships and the way he responds to the appealing interests of life.

When we observe the behavior of the adolescent in this aspect of living, his needs as a growing, developing organism are at once evident.

To meet these needs, the young person should learn to recognize and understand himself as subject to the laws of living creatures. Besides understanding the purely biological laws to which he is subject, such as those of heredity and environment and of sexual development, he should also understand how his development as a human being differs from that of other animals. He should develop the understandings, skills, and attitudes necessary for the maintenance of good physical and mental health. He should be led to expand his powers of appreciation and enjoyment of art, literature, hobbies, and games. As a basis for the development of a philosophy of life he should be aided to understand

the development by man of his picture-model of the external world; the history and nature of the physical universe, evolution of plant and animal life and the conditioning effects of the environment, and the nature and limitations of the scientific description of the world. He should be aided to develop a sense of growth and effectiveness of knowledge through a study of major scientific ideas, their influence upon thought and conduct and the conditions under which men live and relate themselves to each other, and their bearing upon man's conception of his place in the universe.

Immediate Personal-Social Relationships

By the time the individual reaches adolescence, he is involved in a multitude of relationships, with his parents, his brothers and sisters, his schoolmates and chums. He has close contacts with persons of both sexes, and with individuals both younger and older than himself. He also has many adjustments to make because of his relationships with culture groups whose manners and customs differ from his own.

The primary adolescent needs in this aspect of living are two—the development of maturity as a participant in home and family life, and the development of maturity in relationships with age-mates of both sexes.

Social-Civic Relationships

Simultaneously with the growth of the adolescent as a person, and with his contacts with his immediate environment, he also is involved in relationships of a broader social character.

This aspect of living is defined by the participation of the adolescent in social and civic institutions, such as the church, the club, the school (in a broader sense than in the previous aspect), and local and national governmental institutions, agencies, and activities. In his contacts he develops concerns with social problems such as housing, divorce, crime, community planning, community health and recreation, and a host of other problems which impinge upon him in his daily activities.

The needs of the adolescent in this relationship are largely implicit in the previous discussion. However, his involvements tend to extend to social relationships of a broader kind. Thus the need for physical and mental health, which is an important aspect of Personal Living and of Immediate Personal-Social Relationships, continues to be important in Social-Civic Life. The emphasis, however, shifts to the adolescent's concern for community health, control of disease, and to the develop-

ment of self-assurance and security in his relationships with others. The needs of the adolescent to participate in democratic processes and in our changing culture are also significant.

Economic Relationships

Again the close relationship between this category and previous ones needs to be pointed out. Social life and economic life are closely related. Even the immediate social life of the individual in the home has definite economic implications, and economic ideals and practices profoundly affect the adolescent's personal philosophy and influence his development as a person. However, in a narrower sense, economic life may be thought of as a separate aspect. It is in this way that the term here is used.

The following are the principal needs of the adolescent in this Aspect of Living:

1. The need to have an emotional assurance of economic achievement.
2. The need for vocational orientation.
3. The need to select and use goods wisely.
4. The need for participation as a citizen in economic life.

The Major Ideals of Democracy

In setting up the democratic way of life as a basis for determining the direction which the meeting of needs should take, we are assuming that a truly democratic society provides more effectively for the satisfaction of human needs than any other type. The difficulty of utilizing the ideals of our democratic society as guideposts for the curriculum lies in the fact that as a people we do not have very clear ideas as to the meaning of democracy, and what it implies in terms of a school program. It is suggested that a study of three accepted elements of the democratic ideal would give significant guidance for the development of secondary education in our country.

I. THE UNIQUENESS AND WORTH OF THE INDIVIDUAL

Perhaps the basic ideal of our American tradition of democracy is the high regard in which the individual is held. It is not difficult to find documentation for the idea that we believe in the uniqueness and worth of individuality. If the individual is held to possess worth, his personality is not to be violated. He is not to be exploited for the gain of others. To assert that personality grows as the individual shares in common ends and purposes. is merely to express our faith that democracy

as a form of social organization is the best means of giving full recognition to the doctrine of individual worth.

This idea of cherishing the development of the unique qualities of the individual in relation to the contributions which such development makes to social life, is well expressed by Dean Johnston of the University of Minnesota as follows:

"As a people we believe in the dignity and worth of the individual. We should appreciate also the complete interdependence of the individual and society. The individual and his good are both the end and the means of social endeavor. The value of society is found in the opportunity for a satisfying life which it secures for the individual. The worth of the individual lies in his contribution to the strength and stability of society. Society exists for the good of all individuals, present and future; social welfare is created and maintained by the efforts of all individuals. Insofar as some individuals seek selfish, anti-social ends, and whenever society follows strange gods, purposes other than the welfare of human beings, society is weak and individuals suffer. The basic faith in the individual which is embedded in the tradition, the thought, and the striving of the American people must be continuously reinterpreted and re-implemented upon the basis of a realistic knowledge of the movement of events, ideas, and interests of contemporary society."

If the basic ideal is to afford a sense of direction for the program of education, it must be utilized as a help in clarifying the basic issues of contemporary American life, and as a guide to developing characteristics of personality which are congenial to it. The more important of these are the following:

Creativeness: By this we mean the capacity of the individual to make novel adjustments to new situations.

What can the school do to help the adolescent develop to the fullest extent his creative possibilities? Primarily, it must try to understand the drives that are, at the moment, giving character to the behavior of the individual. It has, in other words, to take stock of his present needs and interests, and provide as fully as possible for their satisfaction. For example, if he shows unusual interest and ability along certain lines, the school can help him to engage in activities which reach out beyond present experience into uncharted seas, rather than hold him to routine activities.

Personal Interests: The range, depth, and quality of one's interests determine in part his worth as an individual. As long as they are not anti-social in character, the individual's interests should be encouraged

to develop in any directions that seem worthy to him. The school should provide experiences which develop the interests that the student already has and open up new possibilities of interests for him.

Appreciations: Appreciation is taken to mean an emotionalized response which is characterized by enjoyment. To appreciate deeply means to cherish, to esteem, to prize. Its presence in experience marks the difference between mere understanding and a recognition of qualities which are appealing and enjoyable.

The behavior of a person who enjoys a variety of things and appreciates them deeply, is characterized by a zest for living, and by growing standards of value, which contribute to the richness of experience, thereby making for deeper and keener enjoyments.

II. EFFECTIVE SOCIAL PARTICIPATION

A second ideal that is written large in the American tradition of democracy is the sharing of common interests and purposes. It is only when men are free to deal with their differences upon the basis of common interests and concerns that we may expect progressive reinterpretation of the meaning of democratic living, and an enrichment of our common life. Ideals, beliefs, and practices must be subject to revision in the light of new conditions.

More concretely, the school will strive to organize all of its activities so as to develop the following major characteristics of personality:

Social Sensitivity: 1. The socially sensitive person enters appreciatively and sympathetically into the lives of others.

2. He is sensitive to the effects of his own actions as a citizen, producer, consumer, upon the welfare of others.

3. He is willing to take measures that are counter to the immediate comfort of himself, or the group with which he is immediately identified, for the sake of broader social good.

4. He looks upon social maladjustments as problems which can be solved through the application of intelligence, rather than as evidence of the perversity of an unalterable human nature.

5. He evaluates the results of economic and political measures upon the basis of all the human values involved in the situation.

Cooperativeness: It is the business of the school to develop individuals who not only have the disposition, but also the understanding and ability to put this ideal into more general practice. Cooperation means much more than the settling of controversies; it means a vital sharing of inter-

ests, and a working together to promote more wholesome human relationships.

III. THE USE OF INTELLIGENCE

A third dominant ideal of our democratic society which is fundamental to the refinement of "democracy as a way of life" is the reliance upon intelligence in solving problems of human concern, as contrasted with the making of decisions based solely upon traditional beliefs, uncritical acceptance of authority, or blind impulsive action. Democracy rests upon a faith in the intelligence of the common man. Once this faith is destroyed, our only alternative course is some form of dictatorship which means the destruction of democracy itself.

The application of this ideal to the secondary school program would cut very deeply. It would mean that no problem, no creed, no system of belief could be walled off and kept isolated from thorough study, analysis, and evaluation. Within the limits of his maturity, the student would be permitted and encouraged to formulate his own outlook on life, and reconstruct it in the light of new evidence. Out of the welter of conflicting ideals and practices which beset the adolescent on every hand, he would seek to weave unity and consistency into his life, and the school would be committed to the task of helping him in the process, rather than of determining his beliefs and patterns of conduct for him.

In our attempt to examine the basic ideals of our democratic society, there is danger of creating the impression that these ideals and ways of behaving exist as independent elements. Nothing could be further from the truth. It should be kept in mind also that there is no single pattern of life which fits all individuals. Since young people differ in their capacities, interests, and needs we should not expect them all to have exactly the same characteristics of personality. There are an indefinite number of individual patterns of goals, all of which can be definitely related to the broad purpose of general education. Such individualization of goals should be recognized and encouraged, in the interest of developing the uniqueness of the individual.

The significance of this statement for our thirty schools, and others as well, is obvious. With this as the background of our thinking, the thirty school heads and the Directing

Committee recently spent four days in conference asking ourselves: "What are the implications of the democratic ideal for the administration and general life of the school? For the social studies? For science and mathematics? For the arts, English, foreign languages? For core curricula or unified studies programs?" As a result, we are finding more certain direction for the changes which should be made in our schools not only for the students who are going to college but for others as well.

It is clear that we cannot subscribe to the view that the secondary school is a place only for the acquirement of techniques and skills to be used in thinking later in college. Nor are we of the opinion that serious thought concerning the pressing problems of American life can or should be postponed to the years in college. We think we are learning how to develop skills and techniques more effectively through study and discussion of matters of vital concern to the individual and to society.

Are secondary schools helping students effectively to prepare themselves for college? It must be confessed that no one is sure. There is some evidence that they are; much that they are not. But nobody knows certainly. The evidence has not been collected and analyzed. In the Eight Year Study we are attempting to get the evidence.

Four college executives who have the complete confidence of college administrators have been chosen for this work. During the past year they have studied carefully in sixteen different colleges the progress of more than 300 students from the thirty schools. This will be continued for four more years. At the end we shall have an extensive, detailed, and carefully analyzed study of the college experiences of several thousand students. Upon these results we hope to base sound conclusions concerning the changed secondary school experience of our students.

It should be understood that the college study is not concerned with grades alone. We do not consider them an adequate measure of success in school or in college. Experience

in school and college should lead to the fullest possible development of capacities for satisfactory living and for the best possible contribution to the common life. Therefore, our investigation embraces many factors other than grades. The members of our staff working in the colleges are seeking answers to questions such as these:

Is the student developing intellectual competence? Is his scholarship up to the level of his capacity? Does he have intellectual curiosity and drive? Does his thinking conform to the usually accepted characteristics of the scientific attitude? Are his study habits adequate and effective?

Is he using his free time wisely? Does he participate in the arts creatively or otherwise? Is he taking part intelligently in student activities? Does he take advantage of the opportunities for development provided by the general life of the college? Is he concerned with his own physical development and well-being?

Does he manifest practical competence, common sense, and judgment in meeting financial obligations; in obtaining and keeping a job; in the distribution of his time?

Is he developing a personal pattern of goals, a consistent outlook upon life? What are his ethical standards and ideals? Are his vocational objectives becoming clearer?

Is he developing such character traits as integrity, responsibility, initiative?

Has he achieved emotional balance? Is he free from excessive worry? Is he characterized by self-control, self confidence, sense of humor, sense of security? Is he sensitive to the feelings and the needs of others? Is his adjustment to other students satisfactory? Does he have the ability to make and keep friends? What kind of friends does he have? Is he responsive to social situations? Is he developing social poise?

Is he concerned with problems of community life, the community which is the college, and the larger community outside the college? Is he concerned with campus issues? Is he aware of contemporary problems, social, economic, political? Is he able to criticize intelligently? Is he willing to assume responsibilities and to make personal sacrifice? Does he have a sense of duty?

It is too early to draw any valid conclusions or to make any sweeping generalizations on the basis of the evidence in hand.

This can be said at this time: that upon the single basis of grades in college the students from the thirty schools compare favorably with students of equal ability and similar background from traditional schools. After another year the evidence should be more conclusive, and a more complete report will be made then.

When the thirty-school study was begun in 1932, we stated that we hoped to learn how to make the student's experience in high school more meaningful to him and, at the same time, to equip him better for his life and work in college. I have given today some indications of the progress that has been made. We are learning as we struggle with the problem. Doubtless mistakes have been made, but we think we are seeing each year more clearly how to reach our goals.

Our study will end in 1941, when a full report will be published. In the meantime, other groups in California, Michigan, Ohio, and in the eleven states which are included in the Southern Association of Colleges and Secondary Schools, are engaged in similar projects. We have reason to expect, from all these efforts and others elsewhere, that steady and significant growth will come, providing for our youth better preparation for the work of institutions of higher education and for effective participation in American democratic society.

Individualization in the Antioch Program

By A. D. HENDERSON

WHEN education woke to its slow dawn on this earth, it was almost entirely individual, as well as casual. There were no elementary classes in flint chipping in the Stone Age, and probably no evening lectures, open to adults only, on improved technique in killing bears. A boy learned to chip flints by watching some man in the tribe chip flints; and he learned how to kill bears by the highly individualized process of killing one—unless, of course, the bear succeeded in learning how to kill boys first.

In later times the same tradition persisted. To take two saints of our own American educational hierarchy, Mark Hopkins with his log and Louis Agassiz with his fish stand as the classical illustrations of individualized education. It is perhaps trite to remark that the schools and colleges of America today, with their millions of students, are somewhat unfortunately far removed from the Hopkins and Agassiz methods.

There is some evidence, however, that the trend toward mass education—an indirect product of democracy and machine-age prosperity—is going into reverse. The student's need for individual attention is again being recognized, as the progressive school movement eloquently testifies. In college circles we begin to see such innovations as the laboratory method applied to mathematics, for instance, and optional attendance at classes coupled with achievement examinations, autonomous courses, and honors work, all of which are designed to give the individual student more latitude. It is especially encouraging to observe the work of the Educational Records Bureau, which has done much toward devising methods of working with the individual in the most difficult of mass education situations.

I assume that it is important in the classroom to distinguish between those situations which deserve group treatment and those in which individual handling is best. No doubt the budding scientist can arrive at the best understanding of the Agassiz fish by taking his microscope and concentrating his attention on the fish. But if Mark Hopkins were attempting to explore some controversial subject, such as the function of the judiciary in a democracy, he might get better results by abandoning his log for a circle of rocks with a student on each rock, and by engaging in the give-and-take which group discussion arouses.

Group teaching will of course continue to dominate the classroom. To the extent that this is true, it becomes highly important to find the means by which each member of the group has full opportunity to develop as an individual, in accordance with his interests and abilities. Group teaching becomes distinctly bad at the point where subject matter so absorbs the attention of the instructor that he loses sight of the individual needs and progress of his students.

✓ The schools of today are also recognizing that the student needs to be helped to develop certain personal qualities as well as intellectual qualities. Vocational adjustment and training, in particular, are receiving greatly increased emphasis. With the elimination of child labor on the one hand, and the new techniques for determining vocational interests and aptitudes on the other, it seems only reasonable to conclude that the school is now the best place in which to undertake vocational counseling and preparation. Along with such other aspects of personality development as the building of character, the training of the individual in health, the discovery of new avocational interests, and the acquisition of such personal skills as reading and writing, the problem of giving good vocational training and adjustment is a highly individualized one. The schools of the future face the necessity of undertaking individualization in the program on a scale never before attempted.

Any attempt to individualize education at the college level

is complicated by two major problems. First, as I have already suggested, just how far *should* the program be individualized? This question involves the further questions of what a liberal arts education really is, and what common ground of knowledge educated people may reasonably be expected to have. There is obviously a point beyond which knowledge should not be individualized, and a point at which individualized teaching ceases to be efficient. I think I may safely say that no college has yet answered these questions, and determined this point, to its own complete satisfaction.

Second, programs of individualization at the college level are practically limited by finances. Individualization inevitably means a larger staff. In a small college of limited means there may well be a point beyond which individualization of the program will yield diminishing returns on the outlay.

With these two limitations in mind, both of which have affected the Antioch program, I propose to describe and illustrate some of the methods by which Antioch College attempts to deal with its students as individuals. In the sixteen years of the new program we have adopted or worked out methods along this line which have seemed to us to yield significant results. An appreciation of these methods, however, depends to some extent on an understanding of the general purpose and specific objectives which the College seeks to achieve.

In its program, Antioch seeks the recognition and development of all of the principal elements which go to make up a balanced personality. Former President Morgan defined the Antioch aim as being the achievement, for each individual, of a well-rounded life. In his words, the elements of a life should include "physical health; training for work; actual experience in work; a trained appreciation of social, religious, economic, and aesthetic values; a sense of proportion; a well-grounded knowledge of history, literature, philosophy, and science; and finally a life purpose."

Or, to put it in another way, each individual's life might be planned functionally, in six major areas. Each person needs to acquire personal effectiveness, including health and such

elementary skills as reading, writing, speaking, and physical dexterity; and he also needs to acquire social effectiveness, which not only is the ability to be happy and successful in living and working with other people but implies some understanding of the social order as well. Each person needs to discover his vocational aptitudes and interests and to acquire some vocational skills; and for his increasing margin of leisure he needs to develop avocational interests, which may also serve as means of creative expression. Each person should have not only historical knowledge and appreciation of his physical and human environment, but should be in some degree the master rather than the servant of natural and social forces. Finally, each person needs to develop a philosophy of life, as an orienting and motivating force for his actions and life.

By means of formal courses, informal conferences and friendly association, sports, work experiences, campus activities, and any other mechanism or form of experience on which it can lay hands, Antioch College consciously tries to encourage its students to plan their lives in accordance with such a goal. Obviously our program must be highly individualized; the individual, rather than subject matter, must become the focus, although the records of the Antioch students in objective tests and in professional and graduate schools testify that there is no slighting of subject matter. Indeed, intellectual achievement seems to be accelerated when other faculties of the student are also consciously developd.

One word more of warning—or of definition—is necessary before I come to a discussion of specific methods. "Individualizing the college program" is a vague phrase that is very generally abused. Individualization cannot be achieved through formula or through a statement in the college catalogue. It can be achieved in one way only—by *knowing* students. How can a college get to know its students?

There are two broad approaches—first, friendly personal relations between faculty and students, which allow valuable personal appraisals, largely subjective; and objective data,

such as academic records, achievement tests, performance on jobs, extra-curricular activities, health, and so forth. No school can be said really to know its students which does not employ both approaches. Personal relations are frequently the channel through which desirable changes in the individual can be effected; but objective data give the work of the personal adviser a solidity and basis in fact that is almost prerequisite to any real individualization of a college program.

In discussing the methods in use at Antioch, I shall describe, first, the student's admission and orientation; the central records which aid in the control of his later progress; and the student guidance program. Secondly, I shall discuss in brief how individualization is achieved through the academic, cooperative, and student activities programs.

Antioch attempts to answer one simple question concerning each applicant for admission: Can he successfully carry the Antioch program with probable benefit to himself? Iron-clad requirements for admission are accordingly avoided. We do not ask, for instance, that the applicant shall be within a given decile or quartile of his graduating class, although it is only fair to say that as an indirect result of the college demand for all-round qualities, two-thirds of last year's freshman class were as a matter of fact in the top quarter of their class. High scholarship alone, however, does not automatically qualify a student for admission, and Antioch even admits the occasional boy or girl who has not had the advantage of a complete secondary schooling but who appears to have equivalent background and qualifications.

Antioch admissions procedure requires a psychological test, a physical examination by a medical doctor, detailed personal ratings by at least five references, the scholarship record, and finally an autobiography written by the applicant himself, on his family, his school activities, his interests, the books he likes to read, his vocational preferences, his training and experience, and his reason for coming to college.

This detailed application gives the Committee on Admissions reasonably complete and accurate informaion from which

to judge the applicant's ability and readiness for college. It stimulates the prospective student to make a self-appraisal and to formulate tentatively some plans for the future. Finally, if he is admitted to the College, it provides a reservoir of material about the student which is of great value to the faculty advisers and to the officers of the personnel department, in giving them some basis for understanding him and for making initial placements. A summary of the salient points about the student—his high school rank and activities, his interests, his working experience, his finances, and his family—is sent to each faculty adviser, each student hall adviser (upperclass men and women chosen on the basis of their interest and ability in this kind of relationship), the personnel department, and the dean.

The information secured before admission also serves to start the student's central record card. This card brings together in one place the complete record of the individual, including information about his health and family background; vital statistics and photograph; precollege activities, interests, and scholarship; scholastic aptitude and achievement test scores; vocational interest tests; college records on scholarship and the work experiences under the cooperative plan; changes in vocational aims; extra-curricular and campus activities; avocational interests; health while in college; finances; graduation; and the postcollege record of graduate study, occupations, and personal statistics. The card is designed so that any particular phase of personal growth, such as the changes in vocational aims or the results of achievement tests, can be traced chronologically across the page, beginning with the precollege record and carrying through the successive years in college. The detailed record of credits and grades forms an integral part with, but is detachable from, the central sheet.

This central record card has been found of great assistance in the functioning of the individualized program. It gives quickly, in chronological and summary form, the information about the individual essential to the faculty adviser, the instructor, the vocational counselor, and the administrative of-

ficer. It gives at all times a rounded picture of the student's life and growth. It serves both as a cumulative record and as an index to the student's individual folder, where more detailed records—the admissions material, orientation papers, correspondence with parents and employers, health information, and disciplinary action—are kept.

Antioch tries to orient the individual to college and to a program consistent with his needs and purposes, first of all through the activities of freshman week. In addition to the social events planned, the general tests given at this time include the Ohio State Psychological, the American Council on Education Psychological, an Antioch health test, and the battery of Cooperative Sophomore Achievement tests.

The Cooperative test scores are of immediate use in two ways. Thanks to the splendid service rendered by the Educational Records Bureau, the results are available to the college adviser in time for registration, to use in estimating the general interests and abilities of the student, and in deciding with him on his college program. The tests are also used in sectionizing such subjects as English and mathematics, for example; and in mathematics a non-credit section is set up on the precollege level for those students whose achievement falls in the first two deciles of the test. Among the additional interesting uses to which these test scores are put is in accounting, where freshmen are admitted to the course if they are in the top half of the mathematics achievement test and have demonstrated reasonably good reading ability; and in a course entitled "Eighteen Representative Men and Their Times" which is open only to those freshmen and sophomores who have made exceptionally high scores in the whole series of tests.

A third object in giving the Sophomore Achievement tests to Antioch freshmen is to make possible an objective judgment concerning both individual and group progress in the general scope of knowledge which the tests cover. Thus the examinations are given a second time at the student's midway point in college, and again as one part of the comprehensive examination which the seniors take in May. This practice of adminis-

tering the American Council tests to all three classes has been followed for only four years past, and hence has not yet been applied to one Antioch class from the freshman year to graduation. The College cannot yet assert that the test results are valid as an appraisal of individual progress; but assuming that the policy of selective admissions secures classes of equal ability, Antioch's experience with the tests would seem to prove that students continue to gain in breadth of knowledge through their entire college course.

The orientation program for the freshman also includes a conference with the College physician based on the pre-entrance physical examination, plus any additional examination deemed necessary at this time. This conference enables the College to coordinate the individual's health condition and needs, on the one hand, with the physical education program, the subsequent job placement, and occasionally such factors as diet and living conditions on the other. Where a particular health program is indicated, such as treatment of teeth or reduction in weight, it can be commenced without delay. It might be well to say at this point that Antioch "follows up" with a rigorous physical examination of every student at the beginning of his second year, made by the College physician. Physical examinations in succeeding years are optional, with the student encouraged to make full use of College health facilities. Since problems in scholarship, work experience, or social adjustment are frequently health problems in disguise, Antioch has a central health committee made up of the College health and physical staffs, the deans of men and women, and a representative of the personnel department. On its own initiative the committee considers the cases of those individual students who have begun to show signs of difficulty, and by pooling the various records—academic, health, social, cooperative—it is often able to get a complete picture of the difficulty, and in cooperation with the faculty adviser suggests constructive measures.

To return to the freshman orientation program: during the past two years, Antioch has given to 394 freshmen an objec-

tive test covering simple hygienic facts. The ignorance of health knowledge displayed by these two groups has been startling. The College has no desire to incorporate into its curriculum subject matter which more properly belongs at the high school or the elementary school level; but it has during the current year inaugurated special lectures and conferences, and individual reading lists, so that students who have displayed wholly inadequate information on health may fill up the gaps in their knowledge. Their achievement will again be checked at the end of the year.

During the first five weeks of the school year, those students who are entering immediately upon the cooperative plan are interviewed by one or more of the personnel officers, and the job placements determined. The freshmen who are taking the full academic program of forty weeks are interviewed later in the year. Both groups attend the lectures on vocational opportunities and choices. Job placement, however, especially during the first or second years, is not always made for vocational reasons. Frequently other aspects of personal development are of primary importance at this stage: the student may need the experience of adjusting himself to other people, the pampered boy may need the discipline of punching a time clock, and many of the freshmen just need to learn how to work.

The orientation of the student is aided further by a series of lectures given during the freshman year. These are devoted in part to the aims and programs of the College and in part to the planning of various phases of life: vocations, avocations, mental and physical health, social and civic relationships, and ethical and religious values. During the second semester the freshman writes a paper on his life aims and his goals in education, in which he attempts further to analyze his problems and interests, gathers fairly complete information about at least one vocation which attracts him, and works out tentatively a program for the future.

The progress which the student makes at the College, both in the academic and the cooperative work programs, is of course largely dependent upon his own initiative, ability, and

effort. In all of its counseling and individual attention, Antioch attempts to place the maximum degree of responsibility upon the student. An effort is made, however, to stimulate his imagination in directions and toward opportunities to which he has not previously given consideration. The methods used are in part arbitrary. He is required, for instance, irrespective of his major interest, to take an extensive series of courses in the principal fields of human knowledge—a requirement that is important also in promoting breadth of knowledge. The student is required to participate for at least three years in the cooperative plan; and he is required to participate for three years in the health program. The principal method of reaching the student individually and suggesting new directions and possibilities lies, however, in the faculty advising system.

Antioch is perhaps fortunate in that the informality of campus manners and customs permits a large measure of direct personal contact between faculty and students. The cooperative plan provides a staff of personnel officers who devote the whole of their time to guidance and placement work, with particular bearing on vocational choices. The emphasis given by the College to other aspects of personal development makes important the specialized advisers, including the deans, the College pastor, and the health staff. In addition, each student is assigned to a member of the faculty who serves as his personal adviser. The advisers of freshmen and underclass students are given some administrative supervision, and meet for occasional discussions of guidance problems. The upperclass student ordinarily chooses the department head or a professor in his major field of interest as his personal adviser.

The problem of adequate guidance is one of the most difficult for any educational institution to solve. The inherent difficulties such as lack of time, training, and interest are familiar to this audience. In the last analysis it is impossible to make other than a subjective appraisal of any results obtained.

From the administrative point of view there are certain values in an advising system. At Antioch, for instance, every

teaching member of the faculty is also an adviser. The advisers of underclass students are selected for their interest in the problems of the younger students; the more technical and research type of faculty serve upperclass students who are more stable in their personal development and who have more specialized interests. I hope I shall be understood when I say that advising is a device second to none for educating the faculty in what college is about. It is easy to bury oneself in one's department and remain cheerfully unaware of what is going on in the rest of the institution; but when a baby is left howling on one's doorstep, so to speak, to be academically fed and clothed, the attitude of aloofness begins to fade. Advising, at Antioch, is the bond that makes the whole faculty kin; and its integrating effect is both real and valuable.

There are other administrative gains. It seems important to give the student an unquestioned right to seek the advice of a more mature individual on both personal and educational problems; it seems desirable to have at least one member of the faculty sufficiently well acquainted with the student to interpret his statistical record intelligently in the light of his personal history and characteristics; and it seems wise to try to stimulate the student's interest in those matters, beyond the curricular, which affect his life and growth.

Mechanics alone, however, do not make an advising system. The results depend almost entirely upon the adviser's ability to "get through" to his advisee and win his confidence and respect. Confidence and respect can be won only through candid and realistic discussion of any problems the student may present. The paternalistic approach never inspires confidence and tends to defeat the possibility of securing personal growth.

I have spoken thus far of the mechanics which the College has set up to aid in the admission, the orientation, and the guidance of the individual who enters as a student. I should now like to mention some of the opportunities for individual growth offered in academic work, cooperative experience, and various campus activities designed to promote personal development.

For the most part the academic program at Antioch works in the same way that the programs of other liberal arts colleges do. The methods aimed at the individualization of the Antioch curriculum are probably all in use to some extent elsewhere, and hence will be described here only briefly.

We find it important, for instance, to have the curriculum of the first two or three years flexible enough to permit a student to elect at least one course from his field of major interest. The major work can thus begin at once, but slowly enough so that the student can, if he wishes, later transfer to another field. Since the majority of students entering college do not remain to graduate, it is desirable that the College offer freshmen and sophomores some subjects of interest and practical worth to them. Furthermore, there would seem to be educational value in building the course of study in part upon an interest of the student rather than upon a rigid and predetermined sequence of subject matter.

In the teaching of some subjects, the instruction is highly individualized. In elementary mathematics, for instance, the laboratory method is used; in English the student does not get credit until he can demonstrate a certain quality of composition; and in art and aesthetics, the lectures are supplemented by laboratory work which seeks to discover the creative interests and talents of the individual.

In his upperclass years the College shifts the responsibility for learning to the shoulders of the student. Midway in the student's course he makes out a proposed course of study covering the subject matter which he expects to take during the remaining years of his course, in satisfaction of the requirements for graduation. Class attendance is not rigidly required, and the individual is expected, with the help of a syllabus, to proceed more or less independently of "assignments." One interesting result of this arrangement is the amount of individual faculty-student conference work which is done. Another is the larger role of the library in the task of instruction. Since 1929 (about the time of the introduction of the comprehensive examination and the autonomous study plan) the circulation

of books in the library has nearly tripled, although the student enrollment has remained much the same. The number of volumes has increased 73 per cent during the same time.

Antioch also provides certain individualized courses which the student may elect to take in his field of concentration. This work may consist of any subject for which the student has adequate foundation, and for which he can prepare a syllabus with a minimum of supervision. In mathematics, for instance, there are being given this year to one student each: advanced statistics, solid geometry, mathematics of life insurance, and elementary function theory; and to two students: advanced calculus. For this work each student is directly responsible to a member of the department. In some fields of concentration the comprehensive examination may be a study of some problem which is of special interest to the individual.

Another element of rigidity in the program was recently eliminated when it was decided to define a field of major study as being that sequence and combination of subject matter which tends to meet the needs of the individual and make a homogeneous whole. In other words, a field of major study or of concentration, as we call it, is no longer synonymous with a department. For instance, a combination which has met with much student interest is the field of child development, which includes subject matter from the Departments of Home Economics and Psychology, and study with the Fels Research Institute at Antioch.

The cooperative plan of alternating study with work, originated at the University of Cincinnati and now in use at several institutions including Antioch, offers unusual opportunities for adapting education to the individual. Under this plan, as you all know, the student spends five or ten weeks on the campus and a like period on an actual job in business, industry, social or professional work, and so on; jobs are ordinarily filled by two students, one working while the other studies. Obviously the placement of a student on a job is an individual matter, the primary consideration being the individual's needs and interests. Preceding place-

ment, the counseling between student and personnel officer is likewise based upon the individual's life plans. The areas involved in the student's planning have already been outlined, but it is worth reiterating that the personnel officer plays a highly important part in helping the student develop personal and social effectiveness, vocational and avocational interests, practical knowledge of the physical and human environment, and those attitudes the sum of which we call a philosophy of life.

The cooperative plan is in the largest sense of the word an educational device, and its chief justification in a liberal arts college is the educational results—vocational, personal, and general—which it achieves.

Vocationally, students coming to college without definite aims have the chance on a trial-and-error basis to identify their interests; those with specific vocational choices experiment with them in the laboratory provided by the job and thus determine the validity of their choice. In one sample test made of recent Antioch graduates, it was found that slightly more than half had shifted during their college years from the vocational choice with which they entered. Whether this figure is typical of college students in general I do not know; but since the vocational choice ordinarily becomes the field of concentration, and if more than half the students do change their interests when given the opportunity to try them out, it would seem important that they be given this opportunity before they go too far in their college course.

As for personal education under the cooperative plan, it is the opinion of our faculty that the students who have had cooperative experience mature more rapidly, both physically and mentally, than do students without the work experience. Thy appear to gain poise in their relationships with other people; they seem ready to assume initiative and undertake responsibility. (One of the principal stimuli to personal growth in the cooperative plan is that, although the student is always under the guidance of a personnel adviser, on the job he takes the position and responsibilities of an adult.) Students

gain in self-confidence; and they definitely become more critical in their thinking and more mature in their judgment. In personal development, the cooperative plan does for *all* students what extra-curricular activities in the usual college often do for a few student leaders.

The work experience, besides giving the individual a practical knowledge of how to work and an appreciation of the problems and values of work, also serves in some measure as a supplement to the college laboratory facilities. Students in the more technical and applied courses bring from their jobs to the classroom valuable information about new methods and processes, and opinions on the validity of classroom theories. The more general and cultural courses are greatly enriched through the practical knowledge students have gleaned from their jobs and the communities in which they worked; theories in psychology, art, and economics, for example, have more meaning for the individual when he can relate them to concrete experiences and personal observations.

The College not only receives a report on each student from each employer, rating him on the personal qualities he displays; but each student writes a report of his job which both helps him to appraise his experiences and gives the College data from which to make intelligent future placements.

A final opportunity for individual character development in the Antioch program is provided by the various campus activities. The principle of growth through experience and through responsibility is applied to these activities and to campus attitudes. Just as we attempt to train the individual to assume primary responsibility for his health habits, academic work, and cooperative experience, we also try to train him to assume individual responsibility for his ethical and moral attitudes and conduct. As a result, the campus has only the bare minimum of rules, regulations, and penalties. These rules concern fire hazards and safety measures; the use of automobiles; and smoking in one building where the fire risk is unusually great. With two exceptions—a rule governing

student marriages and a restriction placed upon the activities of underclass women—rules governing student conduct are mostly conspicuous by their absence.

The absence of rules does not imply a low level of individual and group conduct—on the contrary. If rules are to be displaced by individual responsibility, a healthy campus tone and a realistic approach to current problems are essential. For setting and maintaining this campus tone, either the faculty, or the students, or the two jointly must assume responsibility. If the faculty assumes it, the students are in the position of a people under a benevolent dictatorship. If the students are permitted to assume it, the tendency is usually toward unthinking acceptance of the generally prevailing attitudes and habits. Logically, the determination of individual and group attitudes and habits seems as genuinely an educational matter as any other activity coming within the scope of the college curriculum. The solution would then seem to lie in assigning the faculty an educational rather than a mandatory role, and in encouraging the student to assume personal responsibility as rapidly as his maturity permits.

At Antioch, faculty and students together constitute Community Government. Each individual is a voting citizen, though votes are graduated so that the more mature individuals have the larger voice, relatively, in actions taken. I have not room here to detail the many community functions which Community Government successfully performs, but one illustration may give an idea of the responsibility with which it is entrusted. A subcommittee of the Community Council, in charge of campus standards, has as its primary function the stimulation of interest and discussion concerning standards of ethics and of social responsibility. It establishes also the method for handling cases of antisocial conduct. At present this takes the form of an individual hearing before a committee made up of the chairman of the Standards Committee, a student friend of the individual whose conduct is being questioned, and the individual's faculty adviser.

Together with the student, the committee attempts to ascertain the facts and discuss with him the significance of his actions both to himself and to the community. If the student is cooperative in his attitude, no other penalty will be prescribed than placing in his college folder an account of the event, approved by himself, which may later be removed if he can submit to the Standards Committee evidence that he has gained a sense of social responsibility. If the individual does not cooperate, as happens only rarely, he may be asked to leave the campus. For the education of the community as a whole a brief account of the case, so worded as to conceal the identity of the individual but outlining the salient facts, the issues at stake, and the action taken, is published in the college newspaper.

May I emphasize again the degree of responsibility which this method places upon the individual student in determining his own attitudes and conduct? He must make his choices, not on the basis of prescribed rules of action, but on the particular situation which confronts him.

In this paper I have attempted to define the Antioch aim in securing the development, in good proportion, of all the elements of personality; and to describe the more significant methods which are used in bringing this program to the individual.

As you have seen, these methods are of two distinct kinds. The first kind is aimed at giving the College reasonably complete basic information about the individual student. The second kind aids the individual in gaining the maximum of personal growth through experience. Whatever difference there is between the Antioch plan and that of the usual liberal arts college is the result of utilizing personal experience —experience in the job, experience in self-directed study, and experience in making ethical judgments—as a primary means of education.

I feel confident of faculty opinion that the methods we use are securing the kind of results we desire. This opinion is, of course, subjective; it is substantiated, however, by state-

ments of the graduating classes. As part of the comprehensive examination given to the seniors in the spring, each senior is asked to write a final paper on his life aims, using as a basis the paper written during his freshman year and analyzing his growth during his college course and his outlook on the future. Though the paper is designed to help the individual clarify his own emerging attitudes and philosophy, it provides incidentally, as it were, much information of value in appraising the results of the Antioch plan. The College attempts to make full use of this information in the constant process of reshaping and refining its objective and its techniques.

Note: Copies of the forms used to illustrate this paper may be obtained by addressing a request to President Henderson at the College, Yellow Springs, Ohio.

Putting the Tests to Work

By MAX McCONN

ABOUT ten years ago—on October 1, 1927—there was opened, at 420 West 119th Street, in New York City, the office of a new organization which had been christened the Educational Records Bureau.

To the few persons who were cognizant of the new arrival its prospects must have seemed pretty dubious. It was not only new but tiny and obscure. Its course was uncharted. It was dependent on a subsidy. An early and unnoted exit into the limbo of forgotten enterprises might readily have been anticipated.

But as it happened this new organization had one asset of large survival value; namely, a real idea, corresponding to a real, though for the most part unrecognized, need of American education. That idea I have attempted to express in its simplest, barest form in my title, "Putting the Tests to Work"—making some actual use, at last, of those instruments of objective and comparable measurement which many of us were still, in 1927, calling "the new tests."

By virtue of that idea the Educational Records Bureau has survived. It has survived in the face of much apathy and some active opposition. It has survived through a great depression. It stands now, after ten years, thoroughly established and widely recognized as one of the most definitely useful agencies in the educational scene.

It seems appropriate that this auspicious tenth birthday of one of our sponsoring organizations should receive some brief celebration here. My topic may thus claim an occasional justification. But I shall claim for it also what may be called a functional justification: because the general topic of this conference program is Individualizing Education; and, as I shall attempt to show, the Educational Records Bureau has made one of the most practical contributions that any

organization or group has ever made towards the realization of that difficult ideal of individualization.

Let me begin by trying to re-create in your memories the educational situation which we faced in 1927. If I am successful in my reconstruction, you will see at once how luminous and statesmanlike the Bureau's idea was amid the obscurity and confusion which confronted us one decade ago.

Not that that period, back in 1927, was barren or unpromising. On the contrary we were suffering from an embarrassment of riches, and were confused by numerous separate stirrings and efforts, which were in some danger of getting in one another's way and in some danger also of the opposite catastrophe, namely, failing to get together at all.

The embarrassment of riches to which I have referred consisted, of course, in the multitude of "new" tests. The disputed but none the less spectacular success of Army Alpha during the war had aroused tremendous curiosity and zeal in this field. By 1928 we had had something like a decade of active test making and test taking and had accumulated a large number of assorted instruments: intelligence tests, aptitude tests, and achievement tests, good, bad, and indifferent. Some were very good indeed, but some others had been devised with more enthusiasm than science, with little concern for the validity of questions or reliability or adequate standardization—and comparability was as yet hardly envisioned. And as between the good tests and the less good, who was to tell the plain man—meaning the high school principal or the college dean—which was which? And anyway, even if we got hold of a good test and gave it and scored it and got our percentiles and looked at them, what then? What did they mean, and what could we do with them? In short, where did we go from there?

In 1927 there was no one who could give us any very convincing answers to these questions; and in the absence of such answers a definite reaction set in against the tests and testing, as you will all remember. And even those of us who did not succumb to the reactionary mood were

bewildered. We felt that we had our hands on a fine new tool or something that was going to become a fine new tool, but we greatly needed some one to tell us how to use it.

So strongly and widely was this need felt that the three-year period centering about 1927—the period 1926-28—saw the beginnings of at least four separate major attacks on this problem, that of putting the tests to work, and related problems.

One of those four major attacks was the Educational Records Bureau. What were the other three? They were:

1. L. P. Hopkins' survey of then existing developments in the personnel field, conducted under the auspices of the American Council on Education's new Committee on Personnel Methods, which had been set up the previous year. This report was published in THE EDUCATIONAL RECORD for October 1926. At the West Point Conference, on July 1 and 2, 1927—just three months before the Educational Records Bureau office was opened—it resulted in the appointment of four subcommittees, on Personal Record Cards, Achievement Tests, Personality Measurement, and Occupational Information, which were respectively to give us, within the next two or three years, the Cumulative Record Card, the Cooperative Test Service, the American Council Personality Rating Scale, and a series of occupational monographs.

2. The Pennsylvania Study, germinated in discussions at the annual meeting of the Association of College Presidents of Pennsylvania in 1926 and definitely initiated with the Pennsylvania college testing program of May 1928.

3. The first state-wide testing programs in the Middle West. The first Minnesota program came in 1927 and the first Wisconsin program in 1928, to be followed quickly by the Ohio program, the Iowa program, and many others.

Enough of general history—but enough, I hope, to show the Educational Records Bureau in due perspective, as one of several notable agencies, all born of the same need and at about the same time, and all setting out in one way or another to put the tests to work. During the past ten years

these agencies, and others which have since come into being, working harmoniously together, have routed the reaction against the tests, found out what they are good for, headed off, in the main, various misuses to which the tests were gravely liable, and steadily developed that ideal of individualization to which this conference is devoted.

I trust I make it clear that the Educational Records Bureau was only one actor in this drama. It claims no exclusive credit and no primacy of credit. But it played its part, and that part is my theme for these few minutes this noon: what its work has been, and how it has been done, and what it has meant for American education during the past decade.

A few words about the specific circumstances which brought the Bureau into existence. It all seems to have happened somewhat suddenly. The period of gestation, from the first hazy suggestion to the opening of offices, was only about six months.

As our associate director has written,[1] the Bureau was "stirred into being" by "the enthusiasm and imagination of Charles K. Taylor," who became its first director. The brief story of beginnings can best be presented, perhaps, in Mr. Taylor's own words.

It appears that in March 1927 there was a meeting of school men and college men, held at the offices of the Carnegie Foundation "to discuss college entrance problems." At this meeting it was suggested

> that it would be very helpful if there could be established an impersonal, independent organization which would, by means of chosen tests of various kinds, aid member schools in deciding as to the college fitness of their pupils. A subsequent meeting of experts in tests and examinations strongly approved of this idea, and the suggestion arose that such an agency might also aid the schools in comparing the work of any class with that done in similar classes of any other school of the asso-

---

[1] Eleanor Perry Wood, "The Bureau—Ten Years Old," *Educational Records Bureau Bulletin*, No. 20, June 1937.

ciation. Then from this idea arose a very splendid one, that if this proposed bureau should keep the educational records of the pupils of the associated schools from year to year, eventually there would be built up a cumulative educational history of each pupil.[2]

There you have the keynote of individualism, struck right at the beginning.

In the first part of June, this whole rounded idea was placed before representatives of the Keith Fund. . . . They seemed to feel that the idea was timely and worthy of support, and therefore at that time promised to back the proposed bureau for two years.[3]

And that, it seems, was that. The next entry records the opening of offices on October 1, 1927.

Apparently the new organization, "with an active membership," according to the present director, "of four independent schools," [4] went into action at once, conducting that first fall a program of intelligence testing, in which about twelve schools participated. In most of these dozen schools only the seniors were given the intelligence tests, to aid in determining their fitness for college, but "some schools," according to Bulletin No. 1, "were interested in testing their whole school population," and Milton Academy is named as "being the first one to have every pupil so tested" by the Bureau.

Immediately, also, preparations were begun for a much more ambitious testing program in the spring, to include not only intelligence tests but a substantial battery of achievement tests.

During that winter and spring of 1927-28, the director visited schools throughout the New England and other eastern states and, in the delicate phraseology of the second bulletin, "described to them the services which the Bureau was

---

[2] Charles K. Taylor, "The Report of the Director," *Educational Records Bureau Bulletin,* No. 1, June 1928.

[3] *Ibid.*

[4] Ben D. Wood, "The Origin and Work of the Educational Records Bureau," *School and Society,* Vol. 34, No. 886, Dec. 19, 1931.

prepared to render," in other words, campaigned for members—a necessary and useful service.

Meanwhile, back at 420 West 119th Street, a quiet person modestly styled the "statistician," must have been extremely busy getting in equipment, developing record forms, and selecting and training scoring clerks and typists.

In addition, the first of the Bureau's great standing committees—I use the word "great" with full intention—was set up: the Committee on Tests and Measurements, under the chairmanship of John A. Lester. It became the business of that committee, then and through the years, to tackle the vast mass of test material to which I have already referred, which to the average practicing school man was an unchartable morass, and from it to pick out good tests, the best tests—that is, the best for the purposes of the Bureau and its member schools. Few of us, I fancy, have ever stopped to realize how much this arduous basic job, so quietly and assiduously performed behind the scenes for ten long years, has meant to the member schools and to many other schools throughout the nation to which the Bureau's literature has gone.

In due course the first spring program came off. It was participated in by 32 schools, testing 3,800 individual students and using approximately 12,000 tests. From one or two slightly plaintive sentences in the second bulletin one may infer that this was rather more than the staff had bargained for, but they rose heroically to the emergency and "managed to maintain . . . an average of one week between the time of receiving the tests and making reports to the schools."

Just incidentally, during its first year, the Bureau scored 80,000 test booklets for the Eastman Teaching Films Experiment and devoted its first summer almost exclusively to scoring and checking tests given under the Pennsylvania Study.

There are several other interesting items in the first year, but I must not succumb further to the historian's temptation to linger over quaint beginnings. From this point on I must tell the story topically rather than chronologically. I shall deal briefly with three organizational or institutional aspects,

namely, statistics, finances, and personnel, and then a little more at length with the educational contribution made and its significance.

Of statistics I shall give only a few.

I have already mentioned the "active membership of four independent schools" with which the Bureau bravely began operations in October 1927, the twelve schools participating in the intelligence testing program that fall, and the overwhelming 32 in the first spring testing program. By the end of 1928 the registered member schools had increased to 88. This number grew rapidly to 131 by the end of 1929 and to 196 by the end of 1930. There was no falling off in registered membership during the depression years, but the advance was slow, to only 233 by the end of 1934. Then the figures stepped up to 258 on December 31, 1935, and to 289 on December 31, 1936.

I mentioned also the 12,000 tests noted in Bulletin No. 2 as having been scored in the spring program of 1928. In Bulletin No. 20 (June 1937) a casual sentence reads:

> In the achievement testing program of March and April, 1937, the seventeen Bureau staff members, aided by one hundred twenty-five part-time workers, serving almost thirty thousand hours, scored and reported to one hundred forty-three different schools the scores and independent school percentile ratings on some forty-eight thousand tests, [with] more than twenty-six thousand tests distributed to seventy-two independent school members for local scoring.

And Bulletin No. 19 (January 1937) deprecatingly concedes that "we had been scoring from 115,000 to 130,000 tests for from 15,000 to 25,000 students a year for the past few years," and that "in nine years we have apparently scored in the neighborhood of 1,000,000 tests for some 120,000 different individuals in all schools served by the Bureau."

As American citizens both you and your speaker are characteristically enamored of large round numbers, however much ashamed of that national weakness we may be. Hence I could not bring myself to omit the very pretty totals I have

just cited. Nevertheless we shall all, I am sure, agree heartily with the caveat on this point which we find in Bulletin No. 19 (January 1937):

> Sheer numbers, either of tests or of individuals, do not constitute the best evidence of the value of the Bureau's work. The criterion of the successful fulfillment of the purposes for which the Bureau was organized is the extent to which schools are influenced to institute and maintain actively functioning systematic testing programs as a part of well-rounded programs of guidance, and the extent to which they are aided to individualize their guidance and teaching programs and to improve individual instruction. . . . One single school which has worked out a constructive plan whereby its testing activities and resulting data are brought into a sane, well-balanced, and functional relationship with the educational program and other activities of the school for the benefit of the individual pupils yields more genuine satisfaction than dozens testing haphazardly or for superficial or dimly understood purposes. Most happily the record points to substantial progress in the desired direction.

With respect to finances:

For its first three years the Bureau needed and received generous subventions from the Keith Fund, to the officers of which American education is deeply indebted for their statesmanship in perceiving the large possibilities of this enterprise.

By the end of the third year the receipts from membership fees and scoring charges, in the neighborhood of $55,000, had begun to overtop the expenses, and the Board of Directors, under the leadership of Dean Herbert E. Hawkes, risked a daring decision: to ask no more subventions from the foundations, to run on a self-supporting, non-profit-making basis.

As it turned out, there was hard sledding ahead. The depression, already upon us, deepened. Many schools were compelled to curtail testing programs, and many others to undertake their own scoring instead of having it done by the Bureau. The Bureau's small accumulated surplus was pretty well exhausted, and it and all of us are indebted to the Carnegie Foundation for the Advancement of Teaching for several emergency grants during these lean years. The Bureau

and we are indebted also, in this connection, to a subcommittee, appointed at the Third Educational Conference in November 1934, under the chairmanship of George A. Walton of the George School, which undertook, with notable success, to rally as many of the schools as possible to central scoring, to the educational advantage of the schools and the financial salvation of the Bureau.

By 1935 the tide had turned, and now, after three years of small surpluses again, the Bureau may be said to be safely on its way in this dull but important financial aspect.

The topic of personnel I approach with considerable trepidation. The Bureau has been from the beginning a highly cooperative enterprise, to which literally hundreds of able men and women, especially from the staffs of the member schools, have constantly contributed patient effort and fruitful ideas. One wishes one might name them all. If that were feasible, the resulting list would constitute an interesting Who's Who of progressive educators in these eastern states, with a liberal sprinkling from the West and South.

But to do it is plainly impossible, and there are a few individuals whose contributions have been so outstanding that it may not be invidious to name them above the rest—whom you will in fact wish to have named on this birthday occasion.

The first director, Charles K. Taylor, served from 1927 to 1930. He was succeeded by Winston B. Stephens, acting director from 1931 to 1933 and field secretary during 1933-34. The present director, Ben D. Wood, took office in 1933. Mrs. Eleanor Perry Wood has been with the staff from the beginning, as statistician, 1927-31, and as associate director from 1931 on. In 1936 Arthur E. Traxler was added to the staff as research associate.

Among other cooperators I shall begin with the Board of Directors, and among them with their chairman and leader, Dean Hawkes. It is an open secret that at a time when the fortunes of the Bureau were at a very low ebb indeed he reluctantly but heroically agreed to take hold of it, organized the Board of Directors, secured a charter from the Board of

Regents, and got the enterprise back on its feet; and as chairman of the board from that day till now he has been a rock of strength in every crisis.

Of the original Board of Directors, set up in 1930, three others are still in service: William L. W. Field of Milton Academy; A. B. Meredith of New York University, and Eugene R. Smith of the Beaver Country Day School. John L. Tildsley, district superintendent of schools in this city, served until 1934, when he was succeeded by Richard D. Allen of Providence. W. W. Charters of Ohio State University served until 1935, when his place was taken by Robert C. Clothier, president of Rutgers University. The other three members of the original board, Albert B. Crawford of Yale University, John A. Lester of the Friends Council on Education, and James N. Rule, formerly superintendent of public instruction of Pennsylvania, now principal of the Langley High School of Pittsburgh, remained in service until 1936, when they were succeeded respectively by Richard M. Gummere of Harvard University, Allan V. Heely of Lawrenceville School, and Superintendent Frederick Bair of Bronxville.

In addition to the members of the Board one must mention at least the chairmen of the five great standing committees to which I referred several minutes ago.

The first of these to be established was the Committee on Tests and Measurements, right at the beginning in 1927. I have already spoken of the notable work which Dr. Lester and his colleagues on that committee have accomplished.

The second committee was set up in 1929, the Committee on School and College Relations, with Eugene R. Smith as chairman.

In 1930 came the Independent Schools Advisory Committee. In this one group it has been the custom to rotate the chairmanship. The successive chairmen have been: Frank S. Hackett, Riverdale Country School, 1930; Katharine Lord, Winsor School, 1931; V. T. Thayer, Ethical Culture Schools, 1932; G. B. Rogers, Phillips Exeter Academy, 1933; Howard Bement, Asheville School, 1934; Frank C. Wheeler, Choate

School, for two years, 1935 and 1936; and Robert N. Hilkert, Hill School, 1937.

Then in 1933 there were set up the Public Schools Advisory Committee, with Dr. Meredith as its first and still continuing chairman, and the Committee on Relations between Elementary and Secondary Schools, with Charles B. Weld of the Taft School as chairman from the beginning till now.

The chairmen of subcommittees which have done important jobs are too numerous to be named, but one must list at least the following: Hart Fessenden of the Fessenden School, Ira A. Flinner of Northwood School, Halleck Lefferts of Pomfret School, and Francis Parkman of St. Mark's School, in addition to George A. Walton of the George School, already mentioned.

Stopping at this point, one does injustice to a number of committee *members,* whose services have been as important as any chairman's could be. Among this group there is one who absolutely must be named: William S. Learned of the Carnegie Foundation, who has made major contributions in the work of both the Committee on School and College Relations and the Public Schools Advisory Committee, and in many other aspects of the Bureau's affairs.

At this point I interpolate a page which is not included in my formal manuscript. It is not included there because I did not dare include it. You do not have to be great detectives to have guessed that this paper was suggested by the present Director of the Bureau. In writing it I had an absolutely free hand except on one point, but on that point I received instructions which were explicit, not to say dictatorial, namely, that I was not to include any laudation of members of the staff. I was free to visit the staff with criticism, contumely, vituperation, but not to praise.

Being a docile person, easily intimidated, I have been governed by that stern injunction. You may have noted already, you will note as I proceed, that the present director and his

predecessors are mentioned only when the outline of the story makes it essential to name them, and always without adjectives. This is not right; it is highly unfair; I can only plead that I am under orders.

But there is one member of the staff whom not Herr Hitler himself—to whom our director bears only an occasional and remote resemblance—could stop me from naming: The one member who has been with the staff from the beginning; who has selected and trained most of the others, has organized the forms and filing, and directed the scoring and computations; who has risen to every crisis of augmenting programs, and refused to be down-hearted when programs dwindled; the author, moreover, of the bulk of the twenty bulletins—not only of masses of tables, meticulously accurate and beautifully clear, but of many pages of valuable interpretive comment. She wields a pen which can make semi-interquartile ranges interesting and percentiles almost thrilling, and year after year she has shown the rest of us the real meaning of the scores, the fundamental philosophy and practical human purposes of it all. As I have thumbed back and forth through those twenty bulletins gathering my material, I have been forced to the conclusion that, after all due credit has been given to many other loyal workers, the chief bulwark of this enterprise from the beginning has been and is that one able and devoted person: Eleanor Perry Wood.

Now back to my legal manuscript.

We come now to the crux of the matter: the work of the Educational Records Bureau, the contribution it has made. What has that work been?

It has been centered, of course, in actual testing. Every autumn and every spring, as regularly as the leaves fall and bud again, come the testing programs of the Educational Records Bureau: tests recommended, distributed, scored, and reported upon. If that were all, if only so much had been efficiently performed, it would have been much. And if the

staff and the committees and directors had become obsessed by, and intellectually buried in, the vast mass of mechanisms and routines which are involved, that would have been only natural and very pardonable.

But we all know that did not happen. To my mind the outstanding characteristic of the Educational Records Bureau, which makes it a shining example for other educational agencies to follow, has been its unwavering, persistent *emphasis on fundamental ideas,* on the underlying philosophy, the human purposes, the long-time goals of all testing and recording. Its personnel seem never to have forgotten for a moment that those tests with which they must be so arduously concerned day in and day out are only means, not ends. In every publication and in all correspondence and conference the ends are pushed conspiciously out in front like an illuminated float at the head of a procession.

I shall presently mention several of these fundamental ideas, with some illustration of the skillful assiduity with which they are reiterated and enforced in the bulletins. But first let me comment on the equally notable wisdom with which various threatening errors and dangers have been avoided.

The danger threatening at the very beginning was loss or lack of faith in the value of objective, standardized tests. In the first bulletin we find Dr. Lester combating this difficulty in an admirable brief paper entitled "Measurements for What?" He patiently explains that "a measuring unit *must* be standard," that we do not use in our gymnasia "variable footrules or capricious kilograms, nor regard the weighing of Ghandhi as offensive to his spiritual grandeur." But this lion in the path seems to have been easily dislodged. Perhaps it was completely overwhelmed, for the Bureau's clientele, by the impressive report on "The Educational Achievement and Intelligence of Independent School Children," constituting Bulletin No. 2 (1929).

But the opposite danger was not slow in presenting itself: the danger, namely, of a dogmatic faith in the dependability and significance of test results far beyond what is warranted.

This danger has persisted, and we find it repeatedly attacked in the bulletins. For example, in Bulletin No. 6 (1931) we read, apropos of intelligence tests:

> Intelligence is but a part of the whole, and measurement is in its earliest stages. Unless the results are understood to be imperfect in reliability and validity, unless they are correlated with other known and equally important factors, and unless they are constructively used, then intelligence tests may as well not be given at all.

Again, from Bulletin No. 12 (1933):

> There are some who, in the exuberance of their enthusiasm or from inadequate knowledge, have tended to overrate the potentialities of promising new tools and to underrate or ignore their limitations. Those who claim absolute authority for even the best of available tests—whether they are intended to measure subject matter achievement or what has been commonly designated as "general intelligence"—deviate just as much from the intelligent, rational "mean" of test procedure as those who systematically and short-sightedly refuse to accord any merits whatsoever to objective and comparable tests.

Several equally emphatic caveats on this point are included in Bulletin No. 19, published in January of this year (pages 5 and 7).

A third danger arose from the possibility of comparisons between schools — a danger that the Educational Records Bureau testing programs might become another form of interscholastic competition, second only to football. Pleas directed against this evil may be found *passim* in the bulletins. In the main I think they have been effective.

And finally the danger of curriculum domination. This is undoubtedly the deepest and blackest pitfall of all, one into which many other testing programs of national or state-wide scope have unquestionably fallen in the past—they are, for the most part, trying to climb out now! But the Bureau has simply never been committed to any particular curriculum or methodology or program of any kind. It has been ready to test anything it could, to adopt and recommend new tests of any kind in any field, provided they were technically sound.

Its consistent maintenance of this position has been one of its wisest and most valuable policies.

Of course this position is reiterated in its literature. Let me quote just one passage, from a paragraph headed "Tests Are Not Goals of Instruction" in Bulletin No. 13 (1934):

> The tests are made purely for measurement purposes, and for the measurement only of certain aspects of achievement. They are not even remotely adequate substitutes for, or even additions to, the syllabi of the courses. A low score on one or more of these tests, in conjunction with other information, may frequently indicate not that the teacher should redouble her efforts to make the student secure high scores in those subjects, but that the student should be tried out in other courses more appropriate to his abilities and interests. That the tests may be of assistance in teaching is readily obvious, but to set them up as definite teaching "standards" is to defeat one of the ends to be attained through their wise, constructive use, namely, that of freeing the teacher for experimentation with newer modes of learning processes and with new kinds of instructional material.

And now for the major positive emphases, of which there have been at least six. Of these the first three are merely the positive aspects of the doctrines used in opposing those threatening dangers which I have already described. These doctrines may be positively stated as follows:

1. Objective standardized measures are fundamentally important in education as in every other field.

2. We must, however, constantly and scrupulously recognize the limitations of the measures now available.

3. We must not permit tests and other measurement devices to "freeze" either subject matter or methods; rather we must so construct and use them as to encourage freedom and experimentation.

4. A fourth emphasis, which may be regarded as a corollary of No. 3 or as instrumental to No. 3, has been on comprehensive testing over large areas, whole fields. This emphasis has been implicit in the annual recommendations of tests to be used, and has repeatedly been made explicit in the bulle-

tins; as, for example, in this sentence from Bulletin No. 13 (1934):

> Obviously the more comprehensive and general examinations can be, and the less limited they are by the narrow confines set up by artificial subject-matter boundaries, the less they can operate as restrictive influences on teaching.

Which statement is reinforced a few lines further on by a sentence quoted from E. F. Lindquist of the State University of Iowa:

> If a cooperative testing program is to function most effectively for improved educational guidance, the tests used must be broadly comprehensive in character, completely disregarding present arbitrary subject-matter boundaries.

5. The fifth major emphasis has been on cumulative records. Some prevision of this kind of recording was, you may remember, among the several ideas which led to the establishment of the Bureau. Bulletin No. 2 hails the publication of the American Council on Education Cumulative Record Card; and while that particular form is never insisted upon, the bulletins from that time forward never grow weary in preaching the gospel of cumulative recording. A fine explanatory article by Dr. Lester is included in Bulletin No. 6 (1931). Numerous brief passages in other bulletins culminate in the forty-four page section on "The Place of Comparable Tests and Cumulative Records in the Guidance Programs and Curricula of Member Schools" in Bulletin No. 15 (1935). This section includes over fifty letters from principals and headmasters of member schools testifying to the fundamental importance of cumulative records in their own guidance programs, these letters having been collected by the Independent Schools Advisory Committee, under the chairmanship of Frank C. Wheeler, and being presented with an introduction by Mr. Wheeler.

6. The final major emphasis is, of course, on individual guidance. As a matter of fact this emphasis is so fundamental, so pervasive, and so inclusive that it is hardly right to include

it as even the climactic member of a numbered series. In a sense this emphasis—on individual guidance—is the sole emphasis and the total philosophy and single goal of the Educational Records Bureau and of the whole testing movement, including the Pennsylvania Study, the Cooperative Test Service, the College Sophomore Testing Programs, the College Physics Testing Program, the many state-wide testing programs, and all the rest.

I find that, working through the twenty bulletins, I have collected a whole pageful of citations to passages in which this note is struck. It is audible, in fact, in practically every quotation I have given in this paper, though every one was selected to illustrate some other, subsidiary point. Let me cite in addition just one sentence, from Bulletin No. 20 (1937), which explicitly states the Bureau's "sole motivating idea" as being to aid schools "in seeking new and more effective ways of studying the needs, interests, abilities, and achievements of their pupils and in developing an effective system of individual pupil guidance."

The Bureau set out ten years ago, along with other agencies, to put the tests to work. In a large number of independent schools and a smaller number of public schools it has succeeded in doing so. But the only important reason for putting the tests to work or for having tests at all is their value in the sound, helpful guidance of individual boys and girls.

The exigencies of space and time force me to conclude, leaving many important points untouched. I must pass over, for example, the interesting testing of four English schools in 1929; the splendid work done by the Committee on School and College Relations under the chairmanship of Eugene Randolph Smith, enacting the role of apostles to the Gentiles, to carry the gospel of objective tests and cumulative records and individual guidance into the heathen territory of higher education; the important Cooperative Public School Testing Program conducted in 1933 by the Public Schools Advisory Committee, under the chairmanship of A. B. Meredith; the valuable contributions of the Committee on Relations between

Elementary and Secondary Schools, of which Charles B. Weld is chairman; the Bureau's co-sponsorship of this annual conference, which has come to be—in my opinion, at least—one of the most important educational gatherings of the year; and much more.

But enough has been said, I trust, to show that the Educational Records Bureau has played its part well, has done a good work, and has merited, on its tenth birthday, our heartiest felicitations. I am sure I may speak for all of us in wishing it many decades more of equally genuine and ever widening usefulness.

Disciplinary Values in Individualized Education

By B. R. BUCKINGHAM

THERE are no misfit children. There are misfit courses of study, misfit textbooks, and misfit teachers. But in the very nature of the case, there can be no misfit children. The child is what education is for. One might as well say that a man does not fit his clothes as to say that the child does not fit the school. On high authority we have it that the law is made for man, not man for the law. It is one of the tragedies of human institutions that they tend to become formal and mechanical, that they tend to gather about them people who have a vested interest in their perpetuity in unchanging form. Then strange and inconsequential reasons are urged in behalf of this perpetuity of form, and minds are closed to the values of alternative procedures. Productive energies are diverted from the evaluation of new ideas to the prolongation of ideas which were once new but which have ceased to be vital.

I find that my topic this afternoon embraces two ideas and involves the relating of these two ideas. I am going to talk to you about disciplinary values in their relation to individualized education.

At the outset I want to make it perfectly clear that, in my judgment, there is no education, in the sense in which we use the term, except individual education. Learning is a larger word than teaching. In fact, there is no teaching without learning, and learning is as personal as the endocrine glands. It follows, therefore, that any reference which our term "education" has to teaching and administration (which is nothing more than the organization and supervision of teaching) acquires its significance from its relation to learning.

I have said that learning is an individual matter. It may take place in a hundred ways without teaching, but so far as

teaching actuates it, teaching is itself individual. We have heard much about mass teaching, mass instruction. There is no such thing. It is true that teaching may be addressed to a roomful of students, but since it is not teaching unless learning takes place, it is merely simultaneous teaching, the amount and value of which is found in the summation of simultaneous learnings going on in the individual organisms within the sound of the teacher's voice.

Accordingly, when we speak of individualized education we do not imply that any education can be other than individual, but rather that some education takes more intelligent account of the individual. This is nothing more than to say that some education is more effective. The degree to which an educational plan involving administrative, instructional, and curricular procedures conveys a personal message to the individual, is the degree to which that educational plan is effective. Whether the number of students who come under its influence be one or many is an item in educational economics rather than in educational theory.

There was a time when there was a teacher for every student. The pedagogue and his young master walked the streets of Athens and Rome. The scions of noble houses in the Middle Ages each had his tutor. The social implications of the Renaissance and afterwards of the Industrial Revolution were nowhere more apparent than in education. The number of students seeking the ministrations of such educational institutions as existed precluded a continuation of the tutorial system in anything like its earlier form. Clever schemes in the interest of low cost, like those of Bell and Lancaster, were devised. Out of this came a new development—the graded school. When Horace Mann espoused the cause of the graded school he was doing so in the interest of a more intelligent individual education. He believed that children and young people in such a school would constitute sufficiently homogeneous groups in each of the grades to give the teaching maximum individual appeal. Two movements ensued. One was the hardening and formalizing of the graded

school system with its schemes of marking and promoting; the other was a refining of the idea of individual differences. New ways of appraising such differences and a new appreciation of the importance of differences hitherto held to be small convinced educational thinkers of the insufficiency of the graded system, especially as that system acquired more and more unmistakably the attributes of the lock step.

Out of the measurement movement came as almost the first result a consciousness of the wide differences and intricate patterns of individuality, and at the same time a development of more effective means of dealing with these diversities. Individual teaching is just as truly the only teaching now as it was in the days of the tutor for the nobleman's son. I know of no better test of the artist-teacher today than the test of the extent to which he reaches each individual with a personal message while continuing to lead a large group.

In summary, the term "individualized education" as I use it does not set off one type of education of an individualized character from another type of education which is not individualized; the term simply means the type of education which is highly and competently individualized.

If, therefore, we are seeking for disciplinary values in individualized education, we really are seeking for such values in a superior type of education which is consciously and intelligently addressed to students known to possess, each in his own way, specific interests, needs, purposes, and attitudes.

It is a bit difficult to define disciplinary values, but it is not difficult to understand the general meaning of the concept, nor is it difficult to detect disciplinary values when we see them in action. It is more or less like the concept of number. Mathematicians, I am told, no longer define number. The concept becomes so big, the domain of number so broad, that no language general enough to embrace the concept in all its ramifications can be martialed into a definition that has meaning. This is no unusual occurrence. Not long ago I sat through an entire session of the American Psychological Association while the members were wrestling with the definition

of intelligence. No one appeared to be able to give a definition of intelligence which was acceptable to anyone but himself. Similarly, there was a failure to define psychology until somebody offered the suggestion that psychology is what a psychologist does.

In an older and supposedly simpler day disciplinary values would not have been difficult to define. I am referring to the days when a certain doctrine was held which we afterwards called formal discipline. It is interesting to note that the term, formal discipline, was not a contemporary one; it came into use in a more liberal age as a term of opprobrium.

I was taught as a young man that John Locke was fool enough to believe in formal discipline and that Johann Herbart knocked the idea in the head. It seems, however, that the idea was only stunned, because it came to life and had to be executed again by William James and E. L. Thorndike.

More recently I have doubted whether John Locke, so keen in other respects, was so simple in this. As for Herbart, I have never quite succeeded in understanding why his doctrine was supposed to settle the matter. James came to stand in my mind for a brilliant intuitionist whose one experiment bearing on the matter was inconclusive; and Thorndike, treating of formal discipline as transfer of learning, left many a loophole through which the latter might creep and become effective.

I do not propose to support in this year of grace the conception of formal discipline from which a revolt was staged in the late nineteenth century, but I do not believe that all the things that were said against it were true. More specifically, the milder successor to formal discipline, known as transfer of training, cannot in reality be denied. Learning done at one time and in one place has its effect at other times and in other places; and it is astonishing that any theory should have denied this. As a matter of fact, it is difficult to see how mental life could go on without transfer. The mere fact that a skill or an attitude learned in situation "A" does not manifest itself automatically in situation "B," similar enough to make it ap-

propriate, does not at all mean that the learning is ineffective in situation "B." The skill or attitude may be learned in situation "B" much more easily and quickly than would be the case if it had not been learned in situation "A"—and that is transfer, as indubitably as though the learning sprang into full form and vigor in the "B" situation.

But I must restrain myself on this matter of transfer, lest I devote my entire paper to what should be merely an *excursus*. My purpose is served when I point out that the disciplined mind—what we have long had in our thought when we spoke of a liberal education—is, in reality, an affirmation of the potency of transfer. Sometime a great research organization may devote itself not to an attack upon the existence of transfer, but rather to the amazingly fruitful topic of how we may most benefit by transfer.

Disciplinary values then are the residuals of learning. Somebody has spoken of them—or it may have been of a liberal education—as what you have left after you have forgotten all you learned. In its best sense this is a series of character traits—tolerance, open-mindedness, vigor of intellect, truth of emotions, restraint in action. The patterns of behavior in the person who possesses true disciplinary values are as well marked and as highly prized as they are subtly elusive. Those who have sought to define these residuals merely as a knowledge of the best that has been done and said have fallen far short of a true definition. The Great Tradition is a noble tradition. The heritage of the past is a noble heritage. But man cannot find complete satisfaction in any tradition, however great. Nor will his heritage remain noble unless he adds something to it on his own account.

One of the ways in which disciplinary values are sought in school and college is through the establishment and maintenance of exacting standards. It is held that the world is a competitive world and that preparation for life in such a world should include the opportunity to strive, to fail if one must, and to succeed in greater or less degree, all in the face of the strivings, the failures, and the successes of one's con-

temporaries. It would take us too far afield in the time now at our disposal to examine the doctrine of preparation for competition by introducing competition into the schools. I wish, however, to point out that to a greater degree than is desirable the competition demanded in our schools with their grade levels and their credits is an artificial competition gratuitously introduced by the system and for the system.

Consider, for example, our eight-year elementary school. Here is an organization stratified in a wholly artificial way, the like of which cannot be found anywhere in the social order. It is true that an individual may pass from a lower to a higher class in this curious social arrangement, but the institution which maintains this arrangement prides itself on the obstacles which it places in the way of this passage from lower to higher levels. It prides itself upon these obstacles in the name of the maintenance of standards of scholarship.

A friend of mine who was a superintendent in a middle-sized city boasted that no pupil of his, when transferred to another city, had ever been put back to a lower grade. The fact that his schools had abnormally high rates of retardation and abnormally low rates of promotion gave him no uneasiness. He hugged to his soul with satisfaction the bleak and sterile fact that such pupils as he had permitted to advance to a given grade were up to the standards of that grade anywhere else.

A certain high school principal in a metropolitan district observed that year after year the freshmen who entered his high school from a certain elementary school were especially strong in English. After observing this long enough to be sure that there was no mistake about it, he gave the head of his English Department three days' leave of absence to study conditions in this fortunate elementary school and to find out the cause of its success. The head of the English Department returned at the end of the first half-day. His report, though brief, was precise, accurate, and to the point. "They kill 'em off," said he. This elementary school should have been graduating four to six classes a year, for it was a very large school.

It was, in fact, graduating but two classes. The fearful price paid for the maintenance of what this school regarded as standards was a price paid not by the teachers who instituted the practice but by the hundreds of children who were debarred from an opportunity to experience the richer curriculum of the secondary school.

Such is the manner in which the graded school of which Mann had such high hopes has been stratified and formalized. I suggest that a far more sensible plan—sensible because it recognizes the indubitable fact of individual differences—would be to regard promotion merely as the admission of the pupil to a different and, at the moment, more appropriate experience. Grades would then become only variations in curricular offerings, and the achievement of the pupil in the curriculum from which transfer is contemplated would be but one of the elements leading to a decision as to his transfer. What I am pleading for is the recognition of a principle in virtue of which we shall promote children, not so much on the basis of what they *have learned* as on the basis of what they *need to learn.* I urge that more consideration be given to the interests and purposes of the children themselves and less consideration to standards extrinsic in their nature, institutional in their origin and purpose, and unnatural, because unchildlike, in their application.

Let us now turn to the curriculum and see what bearing certain types of material particularly rich in individual appeal may be expected to have on disciplinary values.

One of the most striking of modern movements in education is that which seeks to reconstruct the curriculum; and among the progressive principles operative in such reconstruction is the principle of integration.

Integration denies in greater or less degree the necessity, at least for school purposes, of the subjects of study as these have been organized during the last twenty-five hundred years. I think the integrationists, or fusionists, as they are frequently called, have a strong case. The classification of human knowledge as we have it, from Astronomy to Zoology,

is largely fortuitous. It represents a long series of experiments, intuitions, ingenious theories, leadership, publicity, and lucky breaks. The list of recognized subjects has grown enormously. Many of these subjects are vague in outline and rambling in structure. Some overlap upon others. There is nothing inevitable in such a congeries. It taxes one's credulity to believe that if human beings had the classification of human knowledge to work out *de novo*, they would or could duplicate their present achievement.

When, therefore, the subject-matter specialists cry out against the integrationists we are justified in asking them to show a better cause than the defense of their subjects. Again it is proper to point out that the law is made for man.

This, however, is a long way from sanctioning every kind of integration. The progressives who talk so easily about compartmentalized subject matter and who invent so many new names for ways of regrouping facts and principles are perhaps too facile in their demand that human culture shall be revamped. It is perfectly possible to accept the doctrine of integration without accepting the first crude application of it.

I am convinced, in principle at least, of one thing in this matter of integration; namely, that the subject-matter specialists are wrong when they deny that an integrated program may offer disciplinary values of a high order. Consider, if you please, the way in which such a program has been lately set up in the Virginia Course of Study.

Here is an attempt to classify subject matter according to the things that society does. One of the great ideas under which the actions, thoughts, and emotions of men, individually and in groups, may be subsumed is the idea of *protection*—the protection and conservation of life, of human rights, of property, and of natural resources. Protection is one of the aspects of society in action. Moreover, it has been one of the aspects of human society as long as human society has existed.

Suppose now we organize subject matter—facts, concepts, and generalizations—under the heading of protection. In

other words, suppose we set up protection with a capital "P" as a subject in our curriculum. Isn't it entirely possible to teach this subject and isn't it entirely possible to learn it with all the rigor of a traditional subject? Can it not be made as dignified, as exacting, as internally consistent as any subject with which pupils are likely to deal? In short, may it not have all the disciplinary values of the older subjects? It is my judgment that it can. Even if it cannot—even if as rigorous a pattern may not be pursued with the same unrelenting fidelity that the older subjects already permit—there are nevertheless other considerations which seem to me to give a functional aspect of society the promise of large educational returns, including values called disciplinary.

In the first place, such a subject can be offered in a challenging way to the immature child; yet it is equally capable of challenging the best effort of the mature student. In other words, it has something for everybody. It does not, as so many of the older subjects do, exclude from its contemplation the immature and the feebly endowed. Indeed, the more immature and feebly endowed an individual may be, the more definitely he needs protection and appreciates what it is in its essentials. If the doctrine of need, about which we hear so much these days, has any cogency, if it offers any appeal as a valid basis for the selecting and organizing of school experience, then I submit that protection has a claim upon our attention.

It is not difficult to outline the way in which this functional aspect of society (now thought of as a subject in the curriculum) may be worked into the course of study. Broadly speaking, this can be done on the basis of the known centers of interest at different levels of the pupil's maturity. Perhaps the earliest application of protection, both in the race and in the individual, is found in the home. As a center of interest suitable for young children, the home and the family life are especially recommended; and protection is at once recognized as an essential function of the home. Not inappropriately, therefore, the immature child may be brought to think and

talk and read and write about protection in the family.

The child who is somewhat more mature may properly consider the community—first the neighborhood and later the remoter community—as it protects its members. He may then see the community doing things which isolated individuals could not do; things which add to the security of life and property.

This simple outward development of the idea of protection from the home to the larger community is only one of the ways in which the idea may be projected on the more mature levels. For example, the concept of adaptation to environment offers a rich and appropriate center of interest in the middle and upper grades of the elementary school; and this adaptation, as regards both subhuman and human forms of life, is largely for purposes of protection. And so we may go on with the subject which I am calling protection and relate it to matters suitable to the interests of pupils of various degrees of maturity. We may show its relation to inventions and discoveries, many of which are made for purposes of protection, to machine production, to social provision for cooperative living; and through all these ramifications of our subject we may treat it in its relation to time (that is, historically) and in its relation to space (that is, geographically).

I have said that in the first place a subject such as protection can be offered in a challenging way at various levels of the learner's maturity. Other subjects may likewise be selected as indicating the way society works. *Production* is thus a functional aspect of the social order and is capable of treatment for every level of maturity from that in which the home is an appropriate interest to that which can envisage the larger community, adaptation to environment, the effect of the power age, and so on. *Consumption* is another broad concept which, like protection and production, may serve as an organizing principle for subject matter. We are all consumers. The home is a consumer. So is the neighborhood and the larger community. Through trade one community furnishes goods to be consumed by another and thus secures adaptation to

environment of a high order. The consumption of goods is profoundly affected by inventions and discoveries. Perhaps I have said enough to indicate my faith in the possibility of utilizing the functions of the social order as challenging bases of the selection of subject matter for all levels of maturity.

In the second place, if subject matter is organized according to the things which society does, if, to be more specific, we recognize as subjects such organizing principles as protection, production, consumption, communication, recreation, the expression of aesthetic impulses and so on, we at once secure subjects which are not to be studied for a semester or a year but for a whole series of years. Some of them may be studied for the entire twelve years of the organized public school. That this would be an advantage is believed by all those who in one way or another are trying to reorganize the curriculum so that it shall present fewer and broader subjects. The belief is widely held—indeed, I think it is held by both conservative and progressive, each in his way—that the continued study of a subject has disciplinary and cultural values which a flitting from one subject to another cannot produce. The classical conservatist sees in the long pursuit of Greek, Latin, and mathematics, values which arise from studying one subject long enough and hard enough to secure its inner connections. There is a good deal to be said for this point of view. The progressive, on the other hand, would have us pursue subjects which he calls strands. In organizing these subjects, or strands, he oversteps the boundaries into which human thought has been more or less accidentally divided and selects material for what he regards as a higher and more purposeful integration.

The point I am seeking to make is this: that in the adoption of types of functional activity on the part of society as organizing principles of the curriculum we may secure not only the advantages which the progressive talks most about but also those disciplinary values so dear to the heart of the conservative.

In the third place, subjects of the sort with which I am now

concerned continue to have students after the period of school life has ended. Normally this is not true of the older subjects. Ask a college senior a question about physics and he will content himself with saying that he had physics in his sophomore year. Ask a friend about a poem of Wordsworth's, and he will be satisfied to tell you he majored in English literature in college. Does the professional man remember his trigonometry? Does the man on the street remember his arithmetic? Can the star student in Latin read Juvenal or Pliny today? It is true that the subjects we pursued in school and college, and which we doubtless insist our children shall pursue, represent a high humanistic tradition. But the pathetic fact is that they are quickly abandoned and unremembered. The college senior, the graduate of ten years' standing, the friends and acquaintances whom you encounter in day-to-day contact, are likely to tell you that they studied, that they had, that they majored; but the studies to which they refer are all safely tucked away in the past tense. To most people the school subjects are only a memory.

I have called this condition the greatest waste in education—a waste compared with which financial blunders, retardation and elimination, fads and frills, are as nothing.

One may suggest as a remedy that men and women ought to continue at least some of the fine things they studied in school and college; that in the modern foreign languages or in English Literature, or even in Latin, the copybook maxim, "Nulla dies sine linea," should be a rule of life. It is doubtful, however, if any large number of our people, even under the impact of adult education, can be induced to follow such a rule.

Another rule is to offer our children and young people subjects which will continue to occupy the attention of every thinking man or woman after school days are over. The type of subject matter which I have suggested, organized in the manner proposed, seems to give promise of this through its appeal to every type of individual, each according to his nature and competence. Moreover, by setting up an abiding

frame of reference, it bids fair to secure the disciplinary values arising from the steady contemplation of large and vigorous ideas. If, as most of us believe, it is a function of the school to inspire boys and girls as well as to give them facts, to lift their eyes to the hills, as well as to lower them to the book page, then the attractiveness of a program wide in its range, generous in the catholicity of its appeal, and dynamic in its drive, will be seen to be capable of indefinite adjustment to individual differences and at the same time to promise enduring disciplinary values.

The Nature and Extent of the Reading Problem in American Education

By WILLIAM S. GRAY

THE generous amount of time reserved on this program for the discussion of reading problems reflects the widely recognized need for greater efficiency in reading among students at practically every level of educational advancement. It implies also that schools face numerous challenging problems, if reading is to contribute as largely as it should in the future to personal efficiency, intellectual development, and social progress. It indicates, furthermore, willingness on the part of teachers and school officers to consider such problems deliberately in a genuine effort to improve the efficiency of instruction and the quality of its product.

In attempting to define the nature and extent of the reading problem in American education, attention is directed instantly to the increasing importance of reading during recent years both in adult life and in school activities. Since the World War, social changes have occurred with surprising rapidity. As pointed out in the Thirty-sixth Yearbook, Part I, of the National Society for the Study of Education,[1] new issues and problems have presented themselves on every hand. "The need for clear understanding and discriminating insight has never been greater. Young people and adults have drawn heavily upon every available source of information—the forum, the press, the radio—in facing emergencies as well as in meeting the normal demands made upon them. Furthermore, individuals, agencies, and 'pressure groups' have used all these means" in presenting important facts and in attempting to develop certain attitudes and prejudices.

[1] In discussing the social significance of reading, the writer has drawn somewhat heavily upon Chapter I of *The Teaching of Reading: A Second Report,* Thirty-sixth Yearbook of the National Society for the Study of Education, Part I. (Bloomington, Ill.: Public School Publishing Company).

Available evidence shows clearly that during the last decade there has been a tremendous increase in the amount of reading done among the great mass of our population. This is due in part to the publication of numerous simple newspapers and magazines, to expanded programs of adult education, to persistent effort to eliminate illiteracy, and to the identification and preparation of simple readable books relating to adult interests. Furthermore, a new vigor in systematic reading has developed among those of broader educational advantages. This has been stimulated by the desire for cultural advancement, better social adjustment, and clear understanding of local, state, national and international problems. Concrete evidence of such interest is found in the increasing demand made upon librarians [2] for guides to purposeful and sequential reading and upon adult education specialists for materials to accompany forum discussions and radio programs.

The demand has been no less insistent for printed materials relating to the interests and needs of young people and adults who have faced perplexing personal problems, and for specific help in understanding and interpreting the content of what is read. For example, requests have been made almost constantly for guidance which will enable readers to make needed vocational and professional adjustments, to determine the validity of statements made by commercial agencies, and to evaluate critically the various proposals appearing in print for changing and redirecting social life. Finally, reading for recreation has assumed added significance as a leisure-time activity. Of the various values inherent in recreational reading "those that contribute to social understanding, that stimulate and inspire the reader to creative effort, that provide a common culture so much needed in American life, and that promote the development of enriched and stable personalities" are especially significant.

The foregoing statements suggest important trends relating

---

[2] Jennie M. Flexner and Sigrid A. Edge, *A Reader's Advisory Service* (New York: American Association for Adult Education, 1934).

to the place and function of reading during the last decade. Concerning its actual value in social life a national committee affirms that "it is reasonable to suppose that a community or social group benefits in proportion to the amount it reads of literature adapted to its social, intellectual, emotional esthetic, and other needs." [3] This assumption is based on the fact that "the amount and quality of reading by population groups in society at large has been found an excellent index of social competence." Stimulating as such conclusions are, a deliberate study of the facts shows clearly that the values achieved through reading today are inadequate to meet current needs. For example, a surprisingly large proportion of young people and adults are at present not equipped to read at even a minimum level of comprehension the great mass of the printed material now available. In support of this statement reference may be made to the fact that the average person in the United States ranks about sixth grade in reading ability and that adult reading material ranks on the average about seventh grade in difficulty. Furthermore, experience teaches that many who are able to read well enough to meet requirements imposed by schools are unable to read with the insight, discrimination, and breadth of interpretation essential in life outside of school.

The evidence presented thus far justifies the conclusion that if reading is to serve its largest function in social life, American education faces real problems and responsibilities. For example, it must reduce illiteracy to the minimum; increase reading efficiency among the great mass of our population far above its present level; promote clear understanding and discriminating insight in each of the broader phases of contemporary life; "develop habits of accurate, precise comprehension and interpretation, including critical evaluation; promote greater power in applying the content of what is read, thus contributing to self-direction and social reconstruction;

[3] *Evaluation of Reading,* Progressive Education Association, Evaluation in the Eight-Year Study; Bulletin No. 4 (Columbus, Ohio: Ohio State University, January 1936).

stimulate interests that will contribute both to the wholesome use of leisure time and to the solution of personal and social problems"; and provide a broader common culture than America has achieved thus far. In making these statements the fact is realized that various means of enlightenment are involved—the radio, forum, motion picture, printed material, and various types of contact with reality. As the demand for social understanding increases, however, every means of providing individuals with needed information and stimulation should be developed to the maximum.

What has been said concerning the need for improved reading efficiency in social life may be emphasized with equal vigor concerning its need in school activities. Since the facts which justify this demand will be presented in various connections later, no effort will be made to summarize them at this point. The evidence available, however, shows clearly that American education faces today at practically all levels two distinct but closely related problems. The first concerns the needs of pupils who are unable to engage in the normal reading activities required by the school or who encounter serious difficulty in doing so. The second relates to the nature of the guidance needed by all learners if reading is to serve its broadest function as an instrument of intellectual development and social progress. It is obvious that the latter problem is by far the more fundamental and challenging. Because the former is enlisting nation-wide interest at present, particularly at the secondary and college levels, and is urgently in need of solution, it will be considered first.

The extent of the problem caused by deficient readers may be readily illustrated. In a study made in the Chicago suburban area involving almost six thousand ninth-grade pupils, it was found that about 4 per cent attained scores usually made by second and third-grade pupils, 5 per cent by fourth-grade pupils, 6 per cent by fifth-grade pupils, and 7 per cent by sixth-grade pupils. In all, 22 per cent ranked below a grade score of seven, which has been shown experimentally to be the minimum level of reading achievement at which pupils are able

to read with reasonable ease and comprehension the materials usually assigned in high schools. Equally large percentages of seriously retarded readers have been reported at various levels from the middle grades to the senior college. Such evidence is supported by the testimony of thousands of teachers who report a notable increase during recent years in the number of pupils who encounter genuine difficulty in reading.

It may be helpful at this point to inquire concerning the reasons for the apparent increase in the number of poor readers in our schools. Of major importance is the fact that a larger and larger percentage of pupils above twelve years of age have entered school annually during recent years. It is apparent that as the school population above the primary grades becomes less and less selective in character, certain types of deficiencies become increasingly prominent among pupils. Second, new standards of promotion that have been adopted in many schools make it possible to promote pupils at times who are deficient in one or more phases of their work. As a result poor habits of reading often become more conspicuous than if poor readers had been retained in earlier grades. Third, the enrichment of courses of study has resulted in many more forms and applications of reading than were formerly required. Hence, various deficiencies are exhibited today which were not revealed formerly. Furthermore, wide provision for individual differences, in terms of differentiated content and methods of teaching, tend to accentuate differences in rate of growth and attainments. Consequently, the slow learner and poor reader become increasingly conspicuous. Fourth, the training often provided in the lower schools has been inappropriate for certain pupils, has often been discontinued before the pupil has reached a satisfactory level of efficiency, or indeed has been superficial in some cases, and has failed to develop various habits and attitudes involved in intelligent interpretation.

Closely associated with the foregoing explanations is the fact that as school work is graded steadily upward in harmony with the increasing ability and background of pupils, numer-

ous instances occur of what may be called "the delayed appearance of reading deficiency." For example, pupils who have been able to meet reading and study requirements satisfactorily in the lower grades are often unable to read with sufficient rapidity or depth of interpretation to meet the demands made upon them in higher grades. Indeed a school may seriously challenge the validity of its requirements if no new reading difficulties emerge. The solution does not lie in failing pupils but in identifying the nature and causes of their difficulties and in providing needed adjustments and guidance. Finally, the greater feeling of responsibility for the welfare of each child which has developed recently has made teachers and school officers alike more sensitive to deficiencies of various types, including those relating to reading.

If the foregoing discussion has served its purpose, it should be apparent that the relatively large percentage of poor readers in the upper grades and high school is in part the result of developments which otherwise are highly desirable: for example, the increasing proportion of pupils who remain in schools; standards of promotion that are based on total achievement rather than excellence in a particular subject, such as reading; the enrichment of courses of study; wider provision for individual needs; the steady upgrading of requirements; and greater sensitiveness to reading deficiencies. As one such reform follows another, it becomes increasingly clear that a vigorous, constructive attitude toward reading problems is essential at every level of advancement no matter how thoroughly reading may be taught in the lower grades. Instead of assuming that pupils enter the higher schools with adequate reading habits fully developed, a basic task of all teachers is to ascertain the level at which pupils can read with reasonable ease and understanding, to make adjustments in their school programs, if necessary, and to provide the guidance essential to materially increase their ability to read.

Detailed studies of the attainments and needs of poor readers reveal two groups which can be readily differentiated and which present a genuine challenge at whatever level they

may be found. The first includes those pupils, usually characterized as failures, who encounter such serious difficulty in reading that they are unable to interpret at even a minimum level of efficiency the materials ordinarily assigned at their respective grade levels. It has been shown experimentally,[4] for example, that pupils in the middle grades who rank much below a grade score of four in reading are in most cases unable to engage successfully in the reading activities usually required; likewise, pupils who rank distinctly below a grade score of seven are unable as a rule to interpret intelligently the reading materials normally used in four-year high schools. If their deficiencies are very serious these pupils are thwarted in their effort to succeed in school work that requires reading. As a rule, they are failed through no real fault of their own and are often treated as educational outcasts.

Such treatment of even a small percentage of pupils at either the elementary or secondary level is in conflict with sound educational theory. As pointed out earlier, American education faces the responsibility of making such adjustments in its content, reading materials, and methods of teaching as will provide adequately for the needs of all pupils. This involves among other things a sympathetic, constructive attitude on the part of the school toward poor readers; the detailed diagnosis of reading deficiencies and carefully planned programs of corrective and remedial training under the direction of competent teachers; the provision of simple, interesting reading material that is appropriate for use in special reading classes, and attractive materials that can be read with reasonable ease and understanding in the various content fields; and the relatively wide use of aids to learning other than reading. One of the immediate objectives of such steps is to associate success rather than failure with efforts to learn. As soon as the pupil gains confidence in his ability to succeed he should be stimulated to advance as rapidly as his potentiali-

[4] Doris May Lee, *The Importance of Reading for Achieving in Grades Four, Five and Six,* Contribution to Education, No. 556 (New York: Bureau of Publications, Teachers College, Columbia University, 1933), 64 pp.

ties will permit. Inasmuch as specific problems relating to the diagnosis and remedial treatment of pupils who exhibit serious reading deficiency will be considered by the next speaker, no further reference is necessary to them here except to emphasize the reality of the problems which such pupils present.

A second group for whom more adequate instruction should be provided are the so-called crippled readers. They differ radically from the previous group in that it is possible for them to read the books commonly used at their respective grade levels. However, they do so only with great effort. In a study conducted under the direction of the writer at the ninth-grade level, the so-called crippled readers included those who received grade scores in silent reading of six or better, but who ranked below the middle of the class in reading achievement. Not infrequently, however, pupils who ranked above the average on silent reading tests were found to need corrective training in one or more aspects of reading. A careful study of the reading habits of crippled readers revealed a number of significant characteristics: For example, they read slowly, haltingly, and inaccurately, as a rule. They were unable to recognize at sight many words which should present little or no difficulty to pupils of their general level of advancement, and had not acquired adequate facility in attacking new words. They had relatively meager meaning vocabularies and showed limited power of word analysis. They either had not learned to use the dictionary or had not acquired sufficient skill to use it helpfully. In many cases they were not interested in reading and failed to direct their attention to the content. Their background of experience was usually limited and they failed to grasp clearly and accurately the important ideas presented. They had little real power of interpretation and were unable to grasp the broader meaning or significance of the author's contribution. They evidenced little facility in reading for different purposes, and often failed to vary their rate and method of reading in harmony with the kind of material at hand and the purpose for reading it.

The foregoing characterization of the crippled reader is

typical but by no means exhaustive. It indicates that such pupils differ from cases of severe reading disability largely in the amount of difficulty which they encountered. An analysis of the causal factors involved led to the conclusion that several types of pupils were involved, such as slow learners, those who had not acquired genuine interest in school work, those who lived in unfortunate home surroundings or who had developed unfriendly relations with their teachers, those who were seriously handicapped because of poor physical or organic conditions, and those who were emotionally disturbed or were unduly timid and sensitive. Because of the varied nature of their handicaps, pedagogical case-study techniques should be applied to these pupils rather than the use only of technical diagnostic and remedial procedures in reading.

As conditions exist today, from a fourth to a fifth of those who pass from the elementary school to the high school and a somewhat smaller proportion of those who enter college belong to the class of poor readers described above. They can be differentiated from severe cases of reading disability by the fact that they are able to make use of the reading materials normally employed at their respective levels of advancement. They are in urgent need, however, of more intensive help in reading for at least a period of time than are the better readers at the same grade level. By providing special periods for both group and individual guidance in reading or by supplementing regular instruction in such fields as English or the social studies with specific attention to reading difficulties and needs, notable improvement in reading can be secured during one or more semesters. In a study, for example, made in the Laboratory School of the University of Chicago, 80 per cent of an experimental group equalled or surpassed at the end of a semester the average score made by the grade group at the beginning of the training period. Tests given at the end of the following semester showed that over 70 per cent of the experimental group had retained all the progress which they had made individually and many had continued to progress at very gratifying rates. Very few lost to any

considerable extent during the interval the gains made during the training period. Thus a genuine service was rendered of a type urgently needed today by many upper-grade, secondary school, and college students. As a result, the more elementary and routine needs of the pupils had been met and they were far better prepared to profit to the maximum from further systematic guidance which aims primarily to promote increased clarity of comprehension and greater breadth and depth of interpretation.

Attention will be directed next to certain basic or developmental problems in reading which American education faces today. As indicated earlier they relate to the nature of the guidance needed by all learners if reading is to serve its broadest function as an instrument of intellectual development and social progress. Ever since the days of early Greece and Rome, persistent effort has been made at the elementary school level to improve the teaching of reading. Throughout the intervening centuries one reform has followed another with the result that basic instruction in reading has improved notably in both breadth and efficiency. During recent years no other school activity has been the subject of such constant discussion and investigation, and probably none has improved more rapidly with respect to the materials and methods of teaching employed. A careful study, however, of evidence relating to current practices, achievements, and needs led the recent Committee on Reading of the National Society for the Study of Education to three significant conclusions: first, that the instruction in reading provided in elementary schools should be more broadly conceived and should result in greater independence and efficiency on the part of all pupils; second, that carefully planned guidance in reading resulting in better understanding and keener interpretation should be provided at the high school and junior college levels; and third, that broader interests and improved tastes for recreational reading should be established.

A basic step in any vigorous attempt to improve the reading efficiency of all pupils is to adopt a broader conception of

the nature of reading and of the character of the instruction required than has prevailed in the past. As a rule, instruction in reading has aimed primarily to develop good habits of perception and comprehension, to promote reasonable speed of reading, and to cultivate broad interest in independent reading. The importance of rapid progress in each of these phases of reading is clearly recognized. The need is urgent, for example, for greater accuracy, precision, and thoroughness in comprehension among both elementary and secondary school pupils. It is imperative that teachers of the content field, as well as of reading and literature, should devote themselves with increased vigor to the exacting obligations involved in promoting efficient habits of comprehension. As will be pointed out later, improved techniques are essential if satisfactory results are to be secured.

But good habits of perception, comprehension, and speed of reading are not sufficient. Of even greater importance today in both school and adult life are adequate habits of interpretation. At this level the reader not only recognizes the essential facts or ideas presented, but also reflects on their significance, evaluates them critically, discovers relationships between them, and clarifies his understanding of the ideas apprehended. According to this conception, reading includes much that psychologists and educators have commonly called thinking. A careful analysis of the demands made upon pupils and adults today justifies the conclusion that any conception of reading that fails to include an inquiring attitude, discriminating attack, clear recognition of purpose, orderly reflection, critical evaluation, and the clarification of meaning is inadequate. The implications of this conclusion are challenging. During the next decade, teachers in both elementary and secondary schools should increase their efforts to guide pupils in the study of the meaning and significance of what they read. As Pyle [8] has pointed out, it is not what is presented to

---

[8] William H. Pyle, *The Psychology of the Common Branches* (Baltimore: Warwick and York, 1930), p. 77.

the reader that promotes growth but rather his reaction to the ideas apprehended.

But the nature of the guidance provided should be determined by still other objectives. If pupils are aided through reading in acquiring adequate power of self-direction and ability to solve personal and social problems, they must learn to apply successfully the ideas gained from the prínted page. Since the demands made upon the child increase steadily throughout the grades and secondary school, it is reasonable to assume that the problems which he encounters become increasingly more difficult and complex, and that the need for guidance is as urgent at the higher as at the lower levels. Inherent in the foregoing discussion is the conception that reading is a form of experience that modifies personality. As pupils comprehend accurately, interpret broadly, and apply what they learn wisely, they acquire new understandings, broader interests, and deeper appreciations. Thus personality is continually modified and enriched through reading.

The foregoing analysis carries with it the implication that a far more comprehensive program of basic instruction in reading is essential than has been provided in the past. If properly conceived and adequately adapted to the varying needs of pupils, it should result in greater power and efficiency in reading at the elementary school level and in a notable reduction in the number of corrective and remedial cases which enter the secondary school. At the high school and junior college levels it should result in increased ability from year to year to use reading as an aid in scholastic achievement and in the solution of personal and social problems. In my judgment the provision of appropriate guidance in reading at these levels is one of the most urgent needs of American education today. Until young people have learned to react more intelligently and critically than in the past to the content of the printed page, it will be impossible for the enriched curriculums which have been developed recently to achieve their broader educational and social objectives.

Evidence of the immediate and urgent need of a broad program of guidance in reading is found in the following list of pupil difficulties and limitations reported by a department of social studies in a university high school:

1. Failure among pupils to concentrate on a challenging problem for more than a short period of time.
2. Inability to interpret the meaning of words accurately and broadly in the light of the context or of an appropriate conceptual background, or both.
3. Failure to apprehend facts in their proper relation—especially those of a cause-effect and of a temporal nature.
4. Tendency to gain only a general impression when accurate detailed meanings are essential.
5. Inability to interpret and generalize from maps, charts, and graphs.
6. Failure to understand allusions or to grasp the full connotation of terms.
7. Inability to generalize from a series of illustrations.
8. Failure to grasp the significance of details in the light of the context.
9. Inability to follow the main line of thought in extended reading.
10. Failure to grasp meanings due to certain difficult grammatical or syntactical constructions.

A careful analysis of these and other types of difficulties that secondary school pupils encounter shows clearly that they arise normally as reading materials become more complex and involved and as the intellectual demands made upon pupils steadily increase. Such difficulties cannot be anticipated fully through the guidance provided in reading at the elementary school level no matter how efficient that instruction may be. Both high schools and junior colleges must assume responsibility for providing for the reading needs of pupils which arise normally at successive levels of advancement.

As a means of insuring adequate attention to reading problems, at least two steps are essential. First, the teacher of

every curriculum field should provide systematic guidance in reading for his pupils as occasion demands. This step is imperative if they are to profit to a maximum from the reading opportunities provided. Second, the recent Committee on Reading of the National Society for the Study of Education recommends that special periods be reserved from time to time in which attention may be directed to specific reading problems by one who is especially expert in this connection. Among those that merit special attention at the junior college level, the following were listed:[6]

1. To expand the meaning vocabulary systematically and to develop greater independence in deriving or finding appropriate meanings of words.

2. To promote increased power of comprehension and interpretation. For example:

a. Comprehending exact meanings.

b. Recognizing the broader meanings and implications of what is read.

c. Appreciating the quality or worth of the ideas presented.

d. Making critical judgments concerning the relevance and validity of the facts presented.

e. Sensing the author's aim or purpose, and the assumptions that underlie his arguments.

3. To develop an insight into the attitudes, purposes, and procedures involved in reading different kinds of material. For example:

a. An interesting story *versus* a detailed description.

b. Reading to identify a sequence of events *versus* reading to judge the quality or worth of an author's ideas.

The foregoing examples do not include all those listed by the committee as meriting emphasis at the junior high school level. Furthermore, space will not permit a description of those appropriate at more advanced levels. It is assumed, how-

---

[6] *The Teaching of Reading: A Second Report.* Thirty-sixth Yearbook of the National Society for the Study of Education, Part I (Bloomington, Ill.: Public School Publishing Company, 1937), pp. 124-25.

ever, that the teaching provided in any school should be based on the specific problems which the pupils encounter and on the new needs which they face. Some may argue that the types of training proposed should be given exclusively in the various curriculum fields. The foregoing plan should not be interpreted as reducing the responsibility of teachers of content fields for guidance in reading. Experience shows clearly, however, that special periods provide a type of attention to reading problems that is highly desirable in most schools.

Within the last few years, teachers and specialists both in this country and abroad have given intensive thought to the methods by which systematic growth in reading may be secured at the secondary and college levels. The work of Professor I. A. Richards, Cambridge, England, is very challenging in this connection. Professor Lawrence H. Conrad of the New Jersey State Teachers College recently prepared a mimeographed statement on the "Function of Language in Education" in which he identifies three basic types of training in reading: First, training the eye to serve the requirements of the mind, whatever they may be; second, training the mind in those operations that are involved in recognizing the senses of words; third, training the mind in the sort of reflection that leads to understanding.

Concerning the methods proposed for securing desirable types of growth, one suggestion quoted from Professor Conrad's discussion is included. It relates to a kind of training in reflection that leads to broader understanding:

> Exercises on this level require the learner to make and to test general statements intended to be compatible with the sense of the particular passage that has been read. Such exercises in inductive thought actually serve to train the mind in reflection and in the technique of creating knowledge. We become wise as we become able to make general knowledge out of a few experiences in reading, just as we become wise by adding up the experiences of real life to discover principles of conduct.

Such statements point out types of training which have been very little emphasized in the past. They suggest new possi-

bilities of promoting scholastic progress and intellectual development through carefully conceived guidance in reading at the secondary school and college levels.

The foregoing discussion refers largely to types of training which are equally significant for all curriculum fields. It has been assumed therefore that the teachers of each subject should share in the responsibility for promoting desirable types of growth. In addition, there are certain fundamental reading problems which are unique or peculiar to each field. It is obvious, for example, that each subject has its own technical vocabulary, unusual forms and symbols for interpretation such as maps in geography and equations in mathematics, and different backgrounds of experience which must be developed if interpretations are broad and comprehensive. It follows that the teacher of each school subject has specialized problems as well as those which are common to other fields.

But far more fundamental reading problems are inherent in each content field than any of those mentioned above. They arise out of the fact that each major curriculum field has its own basic principles, standards of evaluation, and internal relationships. It follows that efficient reading in any field is accompanied by those modes of thinking, interpretation, and critical evaluation that characterize a capable student of that field. An illustration may be helpful at this point. Geography, according to some definitions, is concerned with relationships between natural environmental conditions and human activities. To read and interpret geographically, according to this definition, involves among other things the interpretation of the facts apprehended in terms of such relationships. On certain occasions a child or an adult may read a geography merely to learn the facts presented; in such a case, he engages in general assimilative reading but not in geographical interpretation. On other occasions an individual may interpret geographically a newspaper article or a passage in a popular novel. Obviously we are here concerned with types of reading that are determined by facts and relationships inherent in the kind of material read. It is reasonable to assume that appropriate

attitudes and habits of reading can be cultivated best and developed to a high level of efficiency under the expert guidance of teachers in the appropriate curriculum fields.

Characteristic types of relationships similar to those just described can be identified in the case of most curriculum fields, such as history, science, and mathematics. Not infrequently, as in the case of English, various types of interpretation are required such as those involved in fiction and drama. Furthermore, the material presented in one field should often be interpreted in the light of the relationships that characterize another field. For example, the facts apprehended in history should often be interpreted geographically or mathematically, and the facts presented in geography should be interpreted in terms of their economic or historical significance. Pupils often read at a low level of efficiency because they do not recognize the type of interpretation that is required or they lack essential background or training. It follows that teachers should identify the types of relations that are involved in their respective fields, and indeed in specific assignments, and should aid pupils in securing the necessary background and in acquiring efficient habits of interpretation.

No attempt has been made in this discussion to consider all the reading problems which education faces today. For purposes of emphasis two groups have been identified. The first relates to the needs of pupils who encounter serious difficulty in reading. In this connection an effort was made to distinguish between those who fail on account of severe reading deficiency and those who can read the materials ordinarily assigned in the classroom but only with considerable difficulty. The second group of problems relates to the types of guidance needed by all pupils if reading is to serve its broadest function as an instrument of intellectual development and social progress. In this connection the basic attitudes and habits underlying the apprehension of meaning in all fields were distinguished from the specialized modes of thought and interpretation which characterize specific curriculum fields. Little or no reference has been made to many significant problems, such

as cultivating wholesome reading interests, providing reading materials adapted to the interests and levels of achievement of readers, providing appropriate instruction for foreign speaking children, developing adequate library facilities and training in their efficient use, or any of a long series of reading problems that relate primarily to adults. If the discussion has directed attention to and aroused interest in reading problems which should be attacked vigorously in each of the schools represented in this conference, its major purpose has been achieved.

Diagnostic and Remedial Procedures in Reading

By MARION MONROE

EACH year large numbers of children fail to learn to read. Many of these reading failures are unnecessary if early diagnosis and treatment are given. Instead of accepting as inevitable a large number of reading failures, educators are searching for successful corrective and preventive measures. Instruction is being adapted to individual differences to a larger extent than ever before. Reading clinics are being organized to diagnose the difficulties of those children who have already failed. First-grade programs of reading readiness are being conducted to determine the prerequisites for reading and to prevent failure at the early stages of learning.

A remedial reading program is justified in the public schools for many reasons. In the first place, the large numbers of children who need remedial instruction make such programs necessary. Estimates have been made that between ten and fifteen per cent of elementary school children are retarded in reading below the level expected from their mental ages. Each school of 500 children, by these estimates, would contain fifty or sixty cases of reading difficulty. The magnitude of the problem can, therefore, be estimated for any school system. Remedial reading is needed not by just a few very rare and special cases but by a sizable proportion of the general school population. In the second place, a remedial reading program is justified in the public schools because of the relationship between successful school progress and satisfactory adjustment of personality. Educators are no longer content in teaching subject matter and skills as ends in themselves, but as means to the wholesome and effective development of personality. Children who fail in learning to read frequently exhibit undesirable be-

havior. Remedial reading serves as a means of rebuilding the child's attitudes and eliminating the undesirable behavior. Educators who consider the mental hygiene of children as well as their academic progress should be especially interested in the development of adequate remedial reading programs.

There are three phases or aspects of a successful remedial program:

First: *The remedial program should provide a diagnostic center or "clinic" where severe reading and other educational problems may be referred.* As successful remedial instruction depends in large measure upon removing the causes of the child's difficulties, it is essential that teachers be given expert help in diagnosis. Many reading disabilities are too severe or too complicated with physical and emotional factors for analysis by the classroom teacher. No remedial program is complete, therefore, without a diagnostic center, although not every poor reader need be sent to the reading clinic. Often milder disabilities may be readily corrected by a carefully trained remedial teacher who makes her own analysis and devises appropriate treatment from her experience with other similar cases.

Second: *The remedial program should provide for remedial instruction by adequate administration in the schools.* Teachers are oftentimes expected and encouraged to do remedial work with their poor readers, but no provision is made for this work administratively. Remedial work is considered as incidental, and is given only at odd moments. Such odd moments, however, come infrequently in a busy school day for most teachers and poor readers get very little such help. If remedial work is expected of teachers, an adequate provision must be made for the work in the school program at definite, regular, and systematic periods.

Third: *The remedial program should strive to prevent reading disabilities by early diagnosis and treatment in the first grade.* Most schools enroll children in the first grade with no other entrance requirements than six years of chronological age. At no other school grade level are entrance

requirements so casual, and yet no other level is so important for later success. Those children who are poorly prepared for reading should be given adequate foundation in reading readiness before exposure to formal instruction in reading. Physical and language defects which may hinder progress in learning to read should receive correction at the initial stages of learning rather than after long years of failure during which the child fixates undesirable emotional attitudes toward reading.

These three aspects of the remedial reading program, the reading clinic, the corrective instruction of poor readers in satisfactorily administered programs, and the first-grade work in reading readiness are each mutually related and interdependent. The diagnostic clinic would be of little avail unless a practical program of instruction followed the diagnosis; remedial instruction would likewise prove ineffective unless aimed at specific factors discovered by careful analysis and diagnosis; and the need for both diagnostic and remedial work should be gradually decreased by prevention of difficulties in their initial stages.

How does such a three-fold program work in actual practice? This question can be answered by describing the work as carried out in the Pittsburgh Public Schools.

The Pittsburgh reading clinic is a cooperative venture involving examiners from the Medical Department, the Department of Curriculum Study and Research, the Department of Roentgenology, and the Department of Elementary Education. Four examiners meet every child who is referred to the clinic. The medical doctor gives the child a complete physical examination, including X-ray, basal metabolism, and any other laboratory tests needed to make a complete study of the child's physical condition. A psychologist gives each child a series of intelligence tests. Usually the Stanford-Binet examination is supplemented by the Grace Arthur Performance Scale in order to obtain ratings on tests of different types of intelligence. Another examiner gives each child a series of psychological laboratory tests including tests of visual acuity, eye-muscle bal-

ance, tests of hearing at various ranges of pitches with an audiometer, and photographs of eye movements during reading. Still another examiner gives the child a series of achievement tests and tests for various types of reading skills. Parents are interviewed to obtain the child's personal history and to determine any factors in the home environment which may be contributing to his inability to read. The child's school history is obtained and studied for those factors which may help to explain his reading failure.

After all examinations are completed, a staff meeting of the clinic examiners is held, to which the principal, teacher, and reading supervisors are invited. The findings of each examination are reviewed by the examiners. The probable causes of the child's difficulties are summarized. Methods of correcting those factors which are modifiable are listed. Ways of adjusting to those factors which cannot be changed or corrected are suggested. In each case the pattern of difficulties is sought after. Most reading disability cases are complex and a multiplicity of causative factors are uncovered rather than one simple, isolated cause. Each clinical examiner suggests appropriate treatment for the particular factors discovered in his own examination.

A multiple approach is then made to the solution of the problem. Physical defects are corrected, if possible; emotional problems are adjusted; and specific help is given in the various reading skills. Soon after the staff meeting the reading supervisor visits the school and observes the teacher in remedial work with the child. Suggestions and demonstrations are then made by the supervisor as a part of the process of training the teacher. Teachers who are relatively inexperienced in remedial techniques are given a number of such conferences and demonstrations. After a period of time each child studied returns to the clinic for follow-up examinations to measure progress made in reading and to evaluate the re-results of treatment.

The reading clinic meets one day a week and examines about one hundred cases a year. Usually each child seen at the clinic

spends about four hours in the various examinations. Parents accompany the child to the clinic in order to give the child's history and in order that their cooperation in the study may be obtained. Parents have usually been extremely cooperative and grateful for the clinic study. In fact, many principals especially refer to the clinic those children whose parents have become antagonistic and critical of the school because of the child's failure in reading. The clinic, therefore, not only assists the particular children examined, but also serves as a means of parent education. The clinic serves also as a means of teacher training in modern principles of mental hygiene. Usually the teacher who has referred one child to the clinic and later refers another child shows a marked increase in her understanding of the second child's problem and in her ability to individualize instruction to meet his needs.

Although it would be desirable and beneficial to have a complete clinic examination for each child given remedial work, it is not necessary to send every poor reader through the clinic. The clinic examinations are expensive, and many children may be successfully adjusted without such intensive study. A fairly large percentage of reading disabilities clear up satisfactorily in remedial groups. The establishment of such remedial reading groups or "clubs" under carefully selected and trained teachers is the second part of the general remedial program. These classes do not in any way replace the need for the reading clinic, but serve rather as a screen for the selection of cases to be referred to the clinic. Poor readers who adjust successfully in the reading clubs and show rapid gains in achievement tests after a few months' work need not be referred to the clinic. Those poor readers who still fail to progress normally after this attempt at educational adjustment, or who persist in undesirable behavior and attitudes should be referred to the reading clinic. The procedures in establishing the remedial reading groups in any school are as follows:

1. Achievement tests are given to determine the number of pupils needing remedial work.

2. Candidates for the remedial work are given additional standardized and informal tests to determine various weaknesses in the reading skills—oral reading, silent reading, word recognition, etc.—and to determine frequent errors in reading.

3. Results of the tests are analyzed and the children are grouped into small classes or "clubs" according to similarity of achievement and kinds of difficulties.

4. A remedial program is set up administratively. One of the following types of organization is usually selected:

Remedial Home Room Plan: One teacher is freed for remedial work by a redistribution of pupils among the other teachers. The remedial teacher is then given a room equipped with a variety of special materials and attractive books not used as texts in any other room. The poor readers from the lower grades spend the mornings in the remedial room and the poor readers from the upper grades spend the afternoons in the remedial room. Reading, spelling, language, and other reading-related subjects are taught in the remedial room using materials and activities adapted to the children's interests and levels of achievement. During the rest of the day these children return to their usual grades for work in other subjects not closely related to reading, such as art, music, physical education, etc. This plan works successfully when not more than forty or fifty children are to be given remedial work in a building. The size of the classes should be kept small for effective remedial work. It is inadvisable to have more than twenty or twenty-five children each in the morning and afternoon sessions. This plan is a very successful one for rapid progress in reading since the work is given daily.

Remedial Teacher Plan: One teacher is freed for remedial work by a redistribution of pupils among the other teachers. The remedial teacher then meets the poor readers in little "clubs" of five to ten children, each club meeting two or three times a week. The more severe cases may meet three times a week, on Monday, Wednesday, and Fri-

day, for example, and the less severe cases may meet twice a week on Tuesdays and Thursdays. The clubs are staggered in time so that the children do not miss the same subject each time the club meets. For example, one club may meet at nine o'clock on Monday, ten o'clock on Wednesday, eleven o'clock on Friday, one o'clock on the following Monday, etc. In this way the child is taken out of any class only once in two weeks. The clubs are made highly recreational. Each club is selected for similarity of needs in remedial work although the children may actually be placed in several different grades. Thus one club may be trying to improve comprehension of silent reading, another club may be working on oral reading and phonetics, and still another may consist of total non-readers who are striving to learn to read by a kinaesthetic method.

Remedial Period Plan: When it is impossible to reorganize a building in such a way as to free one teacher for remedial work, the remedial period plan may be used. This consists of designating a certain period daily or several times a week as a remedial reading period. At that time, several of the teachers in the building give remedial instruction to groups of poor readers. These groups are called "clubs" and are selected for similarity of needs. The rest of the children not needing remedial work are assigned to other teachers for recreational reading or other types of work. During this remedial period, therefore, the entire school may become an ungraded school and the children may be divided among the teachers on the basis of special needs or abilities.

Each of these three plans for remedial work has been successfully administered and has resulted in marked improvement in reading in a large percentage of cases. Each program can be administered without extra cost to the school system and provides systematic remedial instruction at regular periods.

All remedial and corrective work has as its final goal the elimination of the causes of failure. These causes should be

detected at an early stage of the child's learning so that the development of severe reading disabilities may be forestalled or prevented. The remedial reading program should strive constantly to reduce the number of cases coming to treatment and ultimately to work itself out of a job. This preventive work logically belongs in the first grade. In the first-grade preventive program in Pittsburgh we have followed these general procedures:

1. Children entering the 1B grade are given intelligence tests and a series of reading aptitude tests measuring visual, auditory, motor, articulation, and language abilities

2. On the basis of these results, three groups of children are selected:

a. Those children who have mental ages above six and reading aptitudes above the 50th percentile. These children are called the ready-to-read group and are initiated at once into reading.

b. Those children who are less than six mentally and also less than the 50th percentile in the aptitude tests. These children are called the reading-readiness group and are given definite work preparing them for later reading, but actual initiation into reading is delayed during the first semester.

c. Those children who are above six mentally but who have special disabilities in some fields of the aptitude tests, such as speech or language disabilities, poor visual discrimination or poor motor control, etc. Also, those children who are less than six mentally but who have some special aptitudes which may fit them for reading in spite of their low mental ages. This group is called the special-case group and is given instruction in reading in a way which is modified to meet special needs. Thus, the children with low mental ages but good aptitudes are given materials having simple and repetitive vocabulary since, with their low mental ages, they require a larger number of exposures for the mastery of reading vocabulary.

> Their work is made as concrete as possible and includes many experiences and activities to contribute meaning. On the other hand, the children who are bright mentally but who have special disabilities are taught to read by methods which are adapted to these difficulties. Thus the child who has poor visual discrimination would be taught by a method which does not stress large units for immediate sight recognition, but rather by kinaesthetic methods, or be reinforcing the sight methods with phonetics. Each child in this special group is studied individually and teaching is adapted to his specific needs.

In the schools where this type of work has been attempted in the first grade, failures have been markedly decreased. Those mentally immature children in the reading-readiness group who delayed reading for a semester made good progress later in learning to read. Control groups of mentally immature children were matched in both mental age and reading aptitudes in September of last year. Those children who received one semester of reading-readiness training and one semester of reading instruction were able to score higher on reading achievement tests in June than did the group of children who were not given the reading-readiness training but who received the usual two semesters of instruction in reading. Of course, it will take a number of years to evaluate truly the effectiveness of such a first-grade program in eliminating reading failures, but the results so far appear to be very hopeful.

By the way of summary: A thorough remedial program should involve three phases of work: first, a reading clinic for diagnosis of severe cases; second, effectively administered remedial group work; and third, prevention of reading disabilities by careful analysis in the first grade, followed by reading readiness instruction for those children who lack adequate abilities for reading. With such a remedial program in effect the outlook for ultimately solving the rather serious reading conditions in the public schools is hopeful.

Bases for a New Method of Accrediting Secondary Schools

A Report on One Phase of the Cooperative Study of Secondary School Standards

By WALTER CROSBY EELLS

THE Cooperative Study of Secondary School Standards, formally organized in the summer of 1933, is an outgrowth of informal discussions and conferences running back at least to 1928. It is a temporary, voluntary, cooperative organization of the six regional associations of colleges and secondary schools—the New England, Middle States, North Central, Southern, Northwest, and Western associations. It operates through a Committee of Twenty-One representatives of these six associations, with a full-time executive, research, and clerical staff at the executive headquarters in Washington, which were opened in September 1935.

Full details of the history and organization of the Cooperative Study have been given elsewhere, both in public addresses and in printed form, and need not be repeated on this occasion.[1] The stimulus for the organization of the Cooperative Study was increasing dissatisfaction with the existing standards for accrediting secondary schools. This dissatisfaction had developed as a result of the use of these standards in various forms for many years by the principal regional and state accrediting organizations.

This paper is to be devoted, by request of those responsible for planning this program, to a discussion of the underlying bases for the accreditation of secondary schools. I propose to present the subject from three standpoints:

[1] Walter C. Eells, "The Cooperative Study of Secondary School Standards," THE EDUCATIONAL RECORD, XVII (April 1936), 273-89; and E. D. Grizzell, "The Cooperative Study of Secondary School Standards," *North Central Association Quarterly*, XII (July 1937), 34-44.

a. Faults with present methods of accreditation.

b. Guiding principles for the development of a new, and we trust improved, method of accreditation.

c. Concrete procedures which can be used for this new and improved method of accreditation.

The first two topics will be presented in this written paper; the third, less formally, through comments on a series of lantern slides.

I. Faults With Present Methods of Accreditation

All who have had experience with accrediting organizations realize that they have been exceedingly valuable and that they have stimulated to a marked degree the improvement of secondary education in the United States during the past third of a century. Increasing experience with the standards as established and administered by accrediting associations, however, has led to increasing dissatisfaction with them, to a recognition of some of their inherent weaknesses, and to a growing conviction that extensive revision, probably complete reorganization, is necessary. May I suggest some of the outstanding limitations of accreditation procedures as these limitations are understood by the Cooperative Study? If time permitted, it would not be difficult to give examples of each of these shortcomings, or to support them by formal argument. Because I am much more interested, however, in constructive presentation than in negative criticism, I merely state them without comment. I believe that the common experience of educational leaders here and elsewhere will tend to substantiate their axiomatic character, for the weaknesses of the existing procedures are fairly well appreciated by educators.

a. The existing standards have tended to become mechanical rather than vital—to emphasize the shadow rather than the substance—to measure material facilities rather than the educational process—to stress the letter and overlook the spirit of education.

b. The existing standards have tended to become rigid, lacking the desirable flexibility to make them adaptable to different

types and sizes of schools with varied problems and objectives.

c. The existing standards have tended to become deadening rather than stimulating—to encourage uniformity rather than diversity—to emphasize conformity rather than initiative—to retard rather than to promote desirable progress through pioneering and adventurous experimentation.

d. The existing standards have failed to take into account some of the more modern viewpoints in education, particularly as concerns the marked individual differences which are known to exist among pupils and the desirability of developing educational programs to meet their particular needs.

e. The existing standards have been narrowly academic rather than broadly comprehensive. They have been developed and applied too much in terms of college entrance specifications without sufficient attention to the needs of the many pupils who probably never will enter institutions of higher education.

f. The existing standards and the methods by which they have been applied have been based, to a considerable extent, on untested assumptions and on personal opinions without sufficient validation by scientific procedures.

May I make it perfectly clear that we recognize that the standards as they have been developed during the past thirty-five years have been of inestimable value in raising the level of secondary education throughout the country. Eternal progress, however, is the price of educational salvation. Those responsible for the inception and organization of the Cooperative Study had become convinced that the time had arrived for a fresh and thoroughgoing attack on the whole problem of accreditation. They felt that mere revision of existing standards was not sufficient. They were firm in the belief that a fundamental study should be made *de novo* which, while utilizing the results of existing methods of accreditation and experience with them, should not necessarily be bound in any way by them.

What, then, are the fundamental principles, the essential bases, for such an independent attack on the problem? I shall

list eighteen. May I say, however, that this particular formulation of these principles has not yet been submitted to the General Committee in charge of the Cooperative Study nor approved by it. These principles are an outgrowth of the policies and procedures adopted by the Executive Committee during the past three years, and, I think, implicit in them, but for the precise phrasing of these principles today I am primarily responsible. I say this, not to claim any particular personal credit, but to relieve the committee from responsibility for a formulation which it has not yet explicitly approved. They are offered for your careful and critical consideration at this stage of the Study. Are they clear? Are they specific? Are they satisfactory? Are we working along right lines in our effort to develop methods of accreditation of secondary schools in harmony with these bases? The Cooperative Study will be glad to have suggestions for desirable changes in substance or in form of expression.

II. Guiding Principles for Development of Improved Methods of Accreditation

1. American secondary schools, much as they may differ in details, are essentially alike in their underlying purposes and organization.

> The common purpose of all secondary schools is the transmission of racial culture and the development of the pupil, individually and as a member of society. They are alike in making use of individual teachers, in functioning in a school plant, in possessing a curriculum, in employing instructional methods, in presupposing a background of knowledge and skill secured in elementary school, in meeting several days a week for a major portion of a calendar year, and in many other respects. If such broad similarities as these did not exist, any common method of evaluation and accreditation would scarcely be feasible.

2. In a democracy the fundamental doctrine of individual differences is as valid for schools as for individuals. Schools,

even good schools, differ from each other as markedly as do the children they are endeavoring to educate.

> This means that there should be no inflexible insistence upon uniformity and rigidity of organization, method, and standards for all secondary schools in all parts of the country through any artificially imposed accreditation procedures.

3. A school cannot be studied satisfactorily, nor judged fairly, except in terms of its own philosophy of education, its individually expressed purposes and objectives, the nature of the pupils with which it has to deal, and the needs of the community which it serves. Each school is free to determine its own educational destiny, if not inconsistent with the democracy in which it functions.

> This means that the public school and the private school, the Catholic school and the Protestant school, the urban school and the rural school, the large school and the small school must be judged by comprehensive flexible standards, rather than by narrow, uniform, and rigid ones.

4. Methods of evaluation and accreditation should recognize the differences in background, development, and existing conditions in different states and regions. No attempt now, if ever, should be encouraged to make them uniform for the nation or to have them administered from a single national office.

> This means that the same norms cannot fairly be used for judging the plant, the curriculum, the library, and other features in Maine and Montana, in California and Connecticut, in Vermont and Virginia, in New York and New Mexico. It is desirable that studies be made and procedures summarized on a nation-wide basis, but that application of them be made on a regional or state, or even local basis, with due regard to variations in local conditions and educational, economic, and social background.

5. It is more significant to measure what the school does

than what it is or what it has. The educational process and product are more important to evaluate than the machinery and equipment.

This means that all phases of the school—plant, staff, program — are to be evaluated chiefly as functioning units, not primarily as static ones; that the program, the methods of administering it, and its results, are the chief matters to be considered.

6. A school must be judged as a whole, not merely as the unrelated sum of its separate parts.

This means that accreditation will not necessarily be refused because a school is weak in one feature, or fails to meet a particular standard. Possible deficiency in one field may be excusable or even desirable, or may be more than compensated for by superiority in another field or fields. The general level of the school's work and the interrelationships of the different phases of it will need to be considered.

7. Methods of accreditation, as far as possible, should be based upon scientific studies and objective evidence, rather than upon untested assumptions and unsupported opinions.

This means that the results of research studies and other recent scientific investigations of secondary education should be given full consideration in the development of better methods. Standard tests, approved measuring instruments, valid scales, and similar devices should be used—but they should be used intelligently, not blindly.

8. The considered judgment of competent educators is an essential factor in the evaluation of the quality and character of the work of a school.

This principle is not in conflict with the preceding one, but is supplementary to it. It means that while statistical data are necessary, they are not sufficient. There should be a judicious mixture of the subjective and of the objective. Statistical method cannot replace expert judgment, but it can form a much better basis for the legitimate and helpful exercise of such judgment. Judgment should be based upon all the scientific evidence and

other objective data available, not on guesswork or hunches. Evaluation should be based upon a careful study by a committee of competent educators, who will spend sufficient time in the school to familiarize themselves with all important phases of its work.

9. A valid method of accreditation and evaluation, based tentatively upon existing research studies and expert judgment, should be fully tested and carefully evaluated by extensive experimental tryout in a large group of typical, representative secondary schools throughout the country.

This is simply a recognition of the common scientific procedure that theory should be tested by experiment, and is an application of it in the educational field. In the case of the Cooperative Study, 200 carefully selected schools have been used as the basis for the validation of the materials and procedures which it expects to recommend.

10. While it is desirable in many respects that absolute standards or levels of achievement should be developed, it is recognized that in most of the important aspects of a school's work the best basis for the development of useful norms will probably be the practices in other comparable schools.

While we may know the definite character and amount of apparatus necessary for an experiment in physics or chemistry for a class of a given size, we do not know the optimum number of books for a library, the most desirable outcomes in the teaching of English, or the best methods of supervision. In such cases, after as valid measurements or evaluations as possible have been made, the adequacy of the school in these fields must be judged in part by comparison with other schools measured by the same methods.

11. A school should be judged in terms of the extent to which it meets satisfactorily the needs of all pupils who come to it, not alone of those who continue their formal education in institutions of higher learning.

Standards have been dominated in many cases, if not

completely determined, by college admission criteria. This principle means that it is not sufficient to evaluate the school merely in terms of the success of its graduates in the college and university, important as this may be as one element; it must be evaluated also in terms of its success in giving an education for successful living —economic, social, and personal—to the young people who do not go on to college.

12. A good school is a growing school. It should be judged by its progress between two different dates as well as by its status at a single date.

This means, as Oliver Wendell Holmes once observed, that "it is not nearly so important where we stand as the direction in which we are going." A poor school which is steadily improving may be more worthy of accreditation than a much better school which is steadily deteriorating.

13. Any useful, stimulating, and valid method of accreditation must be flexible with the passage of time; that is, it must be capable of reasonable modification from year to year, as new bases of evaluation and different levels of achievement are suggested or developed from the use of existing ones.

Change is a universal law. Methods of accreditation, like schools themselves, must be constantly changing if they are to keep up to date. Methods which are flexible in their application to a particular school, which recognize valid differences between schools and between their purposes and pupils, will be such as to be easily modified, also, with the passage of time and the benefit of experience.

14. The number of factors evaluated in the modern secondary school must be sufficiently large and varied to give valid evidence of worth in each of the main areas of the school's work.

This means that the accreditation of a school on the basis of a small number of rigid measures is insuffi-

cient to give a valid measure of all essential aspects of the educational program.

15. Accrediting procedures and materials must be brief enough in extent and convenient enough in form to be practicable for use in all secondary schools.

This principle must be considered in connection with the preceding one, and a proper balance be struck between the two. Materials must be brief enough to be usable but long enough to be valid. Extensive sampling is required, rather than complete measurement. The samples, however, must be significant factors that really characterize the school and have been proved to possess real discriminative value. Criteria should take as a model, not the photographer who with his lens takes in everything in sight, but the artist, who skillfully selects the significant elements in the landscape and uses them to suggest details all of which do not appear explicitly on the canvas.

16. If criteria for evaluation are sufficiently flexible, extensive, and thorough, it is not essential that they be applied annually.

This means that complete evaluation of a school may need to be made only at regular or irregular intervals of several years. Changes of administration or other unusual conditions may justify reconsideration of accreditation at special times. Partial evaluations may be made at intervening periods. Continuous self-evaluation is important.

17. The basis and methods of accreditation should be such as to require interest and participation in the process on the part of the entire professional and non-professional staffs of the school.

This means that the basis of accreditation cannot be limited to statistical blanks filled out by clerical assistants, or even to information furnished by the principal alone. It should be a cooperative process involving mutual criticism and suggestion by the entire staff. Criteria should be such as to stimulate frequent if not

continuous consideration and discussion by the school staff regardless of whether or not a visit by a committee of competent educators is anticipated.

18. The primary function of accreditation by the state or regional association should be stimulation toward continuous growth and improvement, not merely inspection and admission to membership.

This means that the conception of the state or regional organization as an inspectorial or police agency gives way to one of mutual friendliness, helpfulness, and stimulation to constant improvement of all schools, good or poor. While accreditation for college admission may be based on relatively few factors, stimulation of a school to become a better school makes a much more extensive body of criteria both desirable and necessary. Such stimulation requires attention not only to such factors as may discriminate between the good school and the poor school but constant attention to all factors or elements common to all types of schools, now and in the future. Nothing is more common than essentials. Not all essentials discriminate, but they must not be neglected; rather they, too, must be improved. Mere accreditation is not sufficient. It is simply the first step in a continuous process. In a democracy a school should not be satisfied with being *good;* it should strive constantly to become *better.*

This, then, is a summary of the principles upon which I feel a sound and helpful method of accreditation should be based. It may be thought of, perhaps, as the Magna Charta of the Cooperative Study. Let me turn now to a series of charts which will illustrate some of the concrete procedures by which, we trust, these principles are actually being worked out in practice.

III. Concrete Procedures for Improved Methods of Accreditation

Figure 1 shows the location of the 200 carefully selected secondary schools which participated in the experimental study last year. These schools were chosen geographically so as to

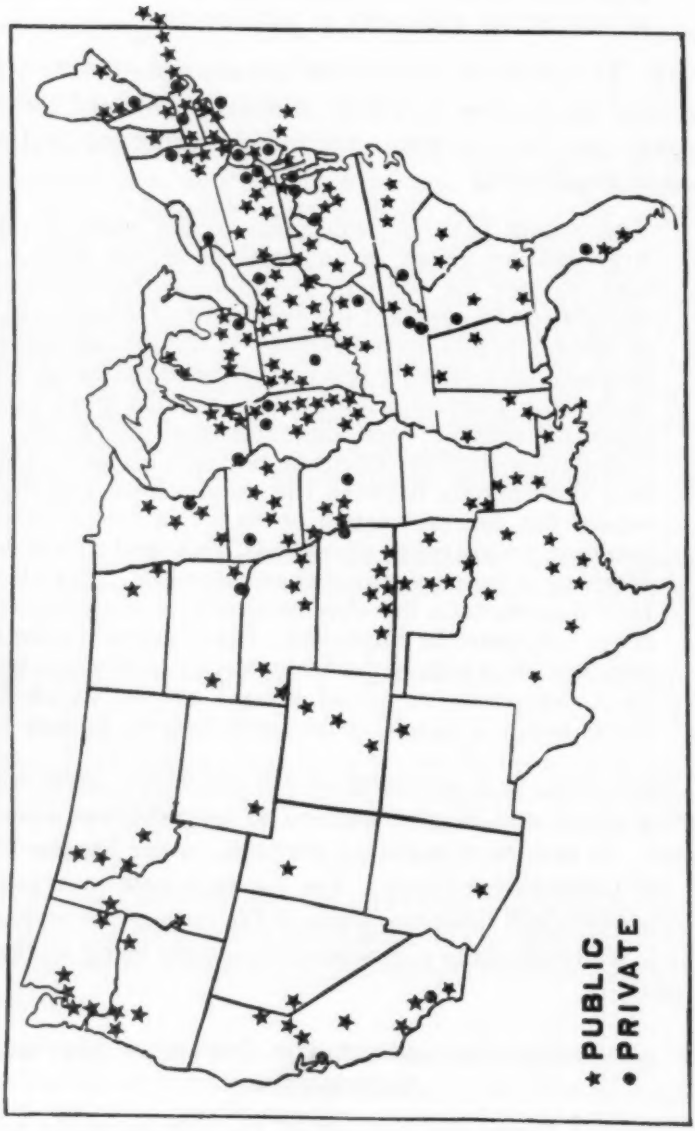


FIG. 1. LOCATION AND TYPE OF TWO HUNDRED COOPERATING SECONDARY SCHOOLS

represent every state, the number in each state being proportional to the number of regionally accredited schools existing in the state. They were also selected on a proportional basis as regards size and type of control. They vary in size from one of only 20 pupils to one of almost 10,000. Thirty-two are private schools, 168 are public. In order to study the non-accredited schools also, 25 of this type were included. Other factors taken into consideration were type of curriculum, number of years included, type of community served, urban or rural location, racial groups educated, and boarding or day school status. No effort was made to select the best schools. In fact, a definite effort was made to secure schools of varied quality, from very inferior ones to very superior ones, since the object of the study ultimately was to arrange these 200 schools in order of educational excellence in order to form a scale for comparison, for purposes to be stated later.

In order to secure extensive and valid criteria for evaluation, these schools were studied by seven different methods, the relative weight to be given to each method being indicated below:

	Percentage
1. Evaluative Criteria	40
a. Educational Program	20
b. Staff	10
c. Plant	4
d. Administration	6
2. Field Committee Judgments	20
3. Progress as Measured by Standard Tests	20
4. College Success of Pupils	6
5. Non-college Success of Pupils	4
6. Judgments of Pupils	6
7. Judgments of Parents	4
	100

A word or two of explanation concerning each of these seven methods is desirable.

1. Evaluative Criteria. Each school has been visited for periods of two to ten days each by a committee of experienced educators who have made a detailed examination, analysis,

and appraisal of extensive information prepared in advance by the school concerning its philosophy and purposes, curriculum, pupil activity program, library service, guidance service, instruction, educational outcomes, staff, plant, and administration. In doing this more than 1,100 different items in these areas have been checked and over 500 evaluations have been made. These are known as the *Evaluative Criteria*. The committees have paid particular attention to instruction, approximately 90 per cent of the 5,500 teachers having been visited in their own classrooms, many of them being thus visited several times. The visiting committees have usually consisted of three or more men, at least one of whom has been a recognized educational leader in the state in which the school is located.

2. Field Committee Judgments. In addition to collecting and evaluating the large amount of quantitative data indicated in the previous paragraph, the visiting committees have made a general qualitative evaluation of each school, taking into consideration especially the underlying philosophy of the school, the nature of its pupils, its environment, and the adaptation of the school to local needs and conditions.

3. Standard Tests. In order to measure significant pupil progress a series of nine psychological, achievement, and social attitudes tests was given to approximately 100 pupils in each school in the early fall of 1936-37. The achievement tests included the fields of English, social studies, natural science, mathematics, and vocabulary; the social attitudes tests measured attitudes toward war, the United States Constitution, and treatment of criminals. The tests were administered under uniform conditions by ten men who went to the schools for this express purpose. In the late spring of 1937 they returned to the schools and gave equivalent forms of the same tests to the same pupils, if they were still in school, in order to measure progress in these fields during the year. Approximately 20,000 pupils were tested on the fall trip, while 17,300 were found to be available for the spring testing. These tests, over 300,000 in number, have all been scored at the Washington

office and are being interpreted with due regard to mental ability, previous academic work, and current curriculum of the pupils tested.

4. College Success of Pupils. In order to judge a school by its products as well as by its processes, two special studies have been carried out. For the first one the cooperating schools furnished lists of almost 13,000 of their graduates in the classes of 1932 and 1936 who had entered some 1,700 institutions of higher education. These lists were classified and sent to the registrars who furnished information concerning entrance and subsequent scholastic success of the pupils. The returns form an excellent measure of the success of the different schools from the standpoint of college preparation. For schools whose primary function is preparation for college and university the weight given this factor will be greater than the 6 per cent suggested above; for those which send relatively few of their graduates to college the weight will be less. Ten per cent is to be given to the two measures of success of the product of the schools, divided appropriately for each school studied, and with due regard to the relative completeness and reliability of the two types of data secured.

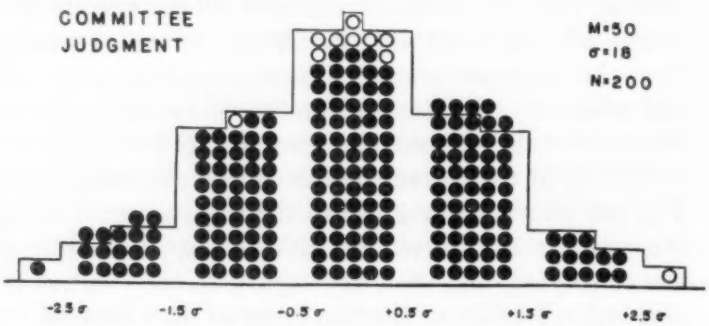
5. Non-college Success of Pupils. In order to measure the success of the same schools from the standpoint of the thousands of pupils who did not go to college, a follow-up study has been made of over 7,000 young people who had entered the schools as sophomores in the fall of 1932, but who had withdrawn from high school before graduation, or if graduating had not continued their formal education beyond that level.

6. *Judgments of Pupils.* At the time of the second testing trip, the opinions of over 17,000 pupils were secured on matters relating to the curriculum, guidance, pupil activities, and other important phases of their experience in the schools.

7. *Judgments of Parents.* A final measure of the success of the schools has been secured by obtaining the judgments of parents of over 7,000 members of the graduating classes. By means of a return postcard they expressed their frank opinions concerning the teaching, helpfulness, guidance, character de-

velopment, and other important phases of the influence of the schools on their sons and daughters.[3]

All of this extensive array of evidence is being studied by the research staff in the Washington office during the current year. It is being summarized, analyzed, weighted, and combined to give a total measure of the quality and success of each of the schools studied and its place in the final scale. As pointed out later, this scale will be used to validate the various tentative items of the suggested criteria and as a basis for comparison with other schools seeking accreditation in the various associations or states.



NORMAL	1	13	48	76	48	13	1
ACTUAL	1	17	47	68	54	13	0

FIG. 2. DISTRIBUTION OF JUDGMENTS OF FOUR VISITING COMMITTEES ON GENERAL QUALITY OF THE TWO HUNDRED SCHOOLS

In spite of the care with which the 200 experimental schools were originally selected, some doubt was felt whether they would form a satisfactory distribution, ranging in appropriate proportions from the very inferior to the very superior. It was feared that there might be a preponderance of the better schools. Considerable light upon this question and upon the ability of the field committees to make competent and discriminative judgments is shown in Figure 2, indicating the dis-

[3] This phase of the Study has been summarized in an article by the writer, "Judgments of Parents Concerning American Secondary Schools," *School and Society*, XLVI (September 27, 1937), 409-16.

tribution of judgments of the field committees. These committees were instructed to grade each school on a scale from 0 to 100 in terms of its general educational excellence. The average of their evaluations turned out to be 49.5 with a standard deviation of 18. A distribution of their evaluations in seven classes in standard deviation intervals was made and compared with a theoretical or chance normal distribution. The two results are shown in Figure 2. The boundary line includes within it 200 small circles, each representing a school, if normally distributed. The solid circles represent schools placed according to committee judgments. The outline circles represent schools of the normal distribution, which were not found, or if found, were not so identified and evaluated by the visiting committee. The number of black circles without the boundary line must of course equal the number of outline circles within it. It will be observed that the actual distribution of committee judgments agreed surprisingly closely with a normal distribution. The number rated as superior was slightly greater than normal, while the number rated as average is eight less than might be expected in a pure chance distribution. The discrepancies in each case, however, are relatively slight.

Figure 2 covers the 200 schools for the country as a whole. Figure 3 is drawn according to the same plan, but for the schools in the six regional associations as separate groups. It is evident that normality of distribution is approximated very closely, even with the relatively small number of schools in each region. As far as the evidence of visiting committee judgment is concerned, therefore, it appears that the sampling of schools is very satisfactory not only for the entire country but for each of the six regional associations.

Figure 4 is introduced to show the marked variation in pupil ability found in the different schools and as further evidence that very inferior as well as very superior schools are probably included in the group. It shows the distribution of mental test scores for 100 pupils in each of three schools, the one that

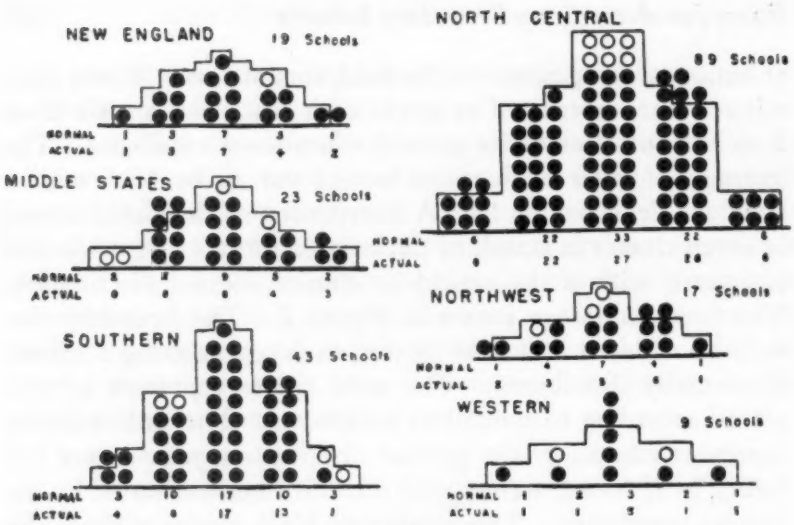


FIG. 3. Distribution of Judgments of Four Visiting Committees on General Quality of the Schools in Each of the Six Regional Associations

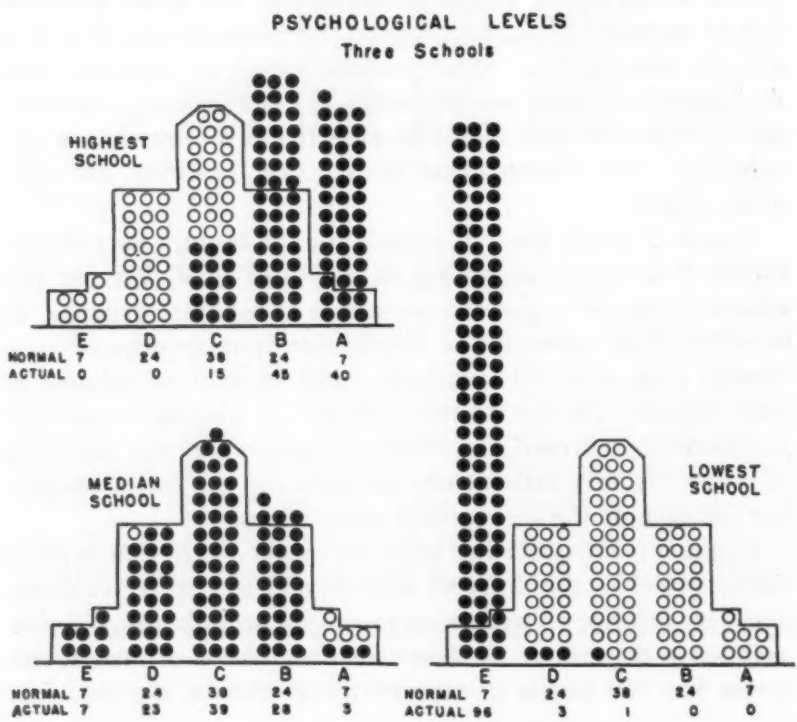

PSYCHOLOGICAL LEVELS
Three Schools
HIGHEST SCHOOL
E D C B A
NORMAL 7 24 38 24 7
ACTUAL 0 0 15 45 40
MEDIAN SCHOOL
E D C B A
NORMAL 7 24 38 24 7
ACTUAL 7 23 39 28 3
LOWEST SCHOOL
E D C B A
NORMAL 7 24 38 24 7
ACTUAL 96 3 1 0 0

FIG. 4. Variation in Mental Ability of Pupils in Three Schools Tested by the Cooperative Study

stood highest, the median, and the lowest on the American Council on Education Psychological Examination.[8] It is notable that the highest school has 85 per cent of superior pupils, while the lowest school has 99 per cent of inferior pupils, measured by the same test.

Figure 5 is a sample of the method by which we expect to report to each of the 200 cooperating schools its relative standing on a considerable number of significant features which have been measured or evaluated by one means or another. The left side of the thermometer is a percentile scale, from 0 to 100; the right side a special scale adapted to the feature under consideration, in this case the number of volumes in the library. The thermometer is filled to a point to correspond to the school's standing in the feature measured. The national norm, of course, is the 50-percentile point. Regional, size, type, and accreditation norms have also been computed and are indicated by appropriate symbols on the scale, regional norms being placed on the left side, the others on the right. The information available for a particular school is indicated in the explanatory statements given on the lower left-hand portion of the figure—in this case for a large, Southern, accredited, public high school. We feel that this device will permit a quick and easy determination of the comparative "educational temperature" of a school in the feature measured, and of its significance in comparison with other appropriate groups of schools.

Figure 6 shows another sample thermometer scale, the only difference being that the special scale on the right is in the form of qualitative evaluations measured from one to five, instead of an objective basis as in Figure 5, where number of volumes was under consideration. In this case the school represented was judged to be better in budget procedures than 74 per cent of the schools studied.

We believe that significant information presented in the

---

[8] For a summary of this phase of the testing program, see an article by the author, "The Scholastic Ability of Secondary School Pupils," THE EDUCATIONAL RECORD, XVIII (January 1937), 53-67.

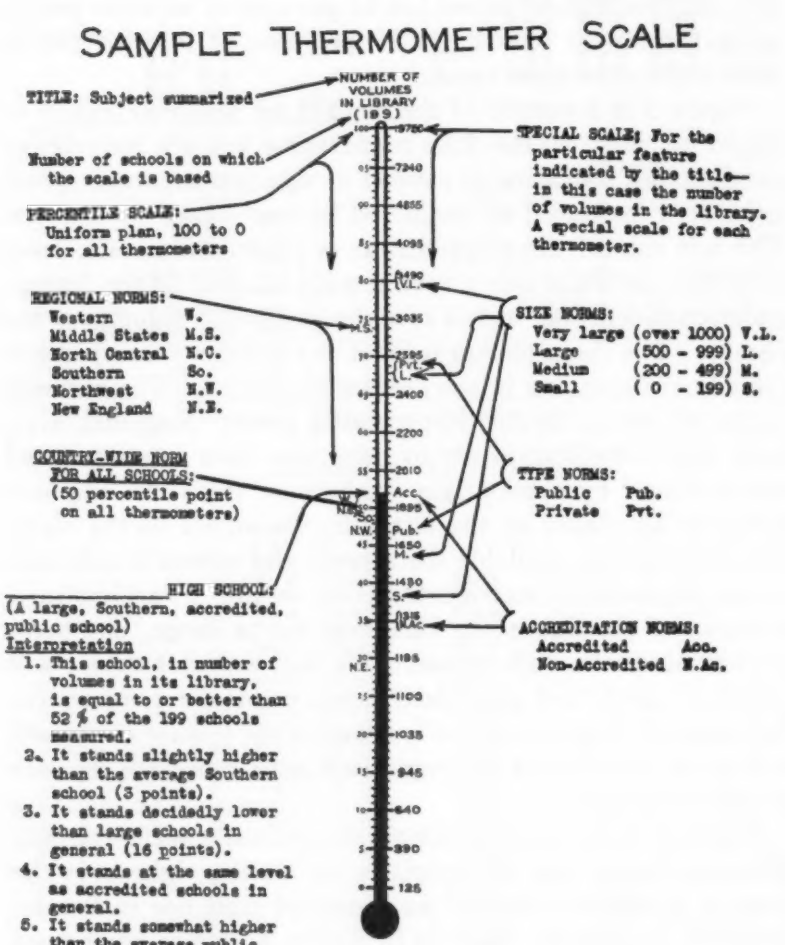

SAMPLE THERMOMETER SCALE
TITLE: Subject summarized
NUMBER OF VOLUMES IN LIBRARY (199)
Number of schools on which the scale is based
PERCENTILE SCALE: Uniform plan, 100 to 0 for all thermometers
SPECIAL SCALE; For the particular feature indicated by the title— in this case the number of volumes in the library. A special scale for each thermometer.
REGIONAL NORMS:
Western W.
Middle States M.S.
North Central N.C.
Southern So.
Northwest N.W.
New England N.E.
SIZE NORMS:
Very large (over 1000) V.L.
Large (500 - 999) L.
Medium (200 - 499) M.
Small (0 - 199) S.
COUNTRY-WIDE NORM FOR ALL SCHOOLS: (50 percentile point on all thermometers)
TYPE NORMS:
Public Pub.
Private Pvt.
HIGH SCHOOL:
(A large, Southern, accredited, public school)
Interpretation
1. This school, in number of volumes in its library, is equal to or better than 52 % of the 199 schools measured.
2. It stands slightly higher than the average Southern school (3 points).
3. It stands decidedly lower than large schools in general (16 points).
4. It stands at the same level as accredited schools in general.
5. It stands somewhat higher than the average public school (5 points).
ACCREDITATION NORMS:
Accredited Acc.
Non-Accredited N.Ac.
9720
7240
4855
4095
3490
3035
2595
2400
2200
2010
1895
1850
1430
1235
1185
1100
1035
945
840
390
125

FIG. 5. SAMPLE THERMOMETER SCALE FOR REPORTING SIGNIFICANT PHASES OF MEASUREMENT OF JUDGMENT OF THE QUALITY OF A SCHOOL—BASED ON OBJECTIVE EVIDENCE

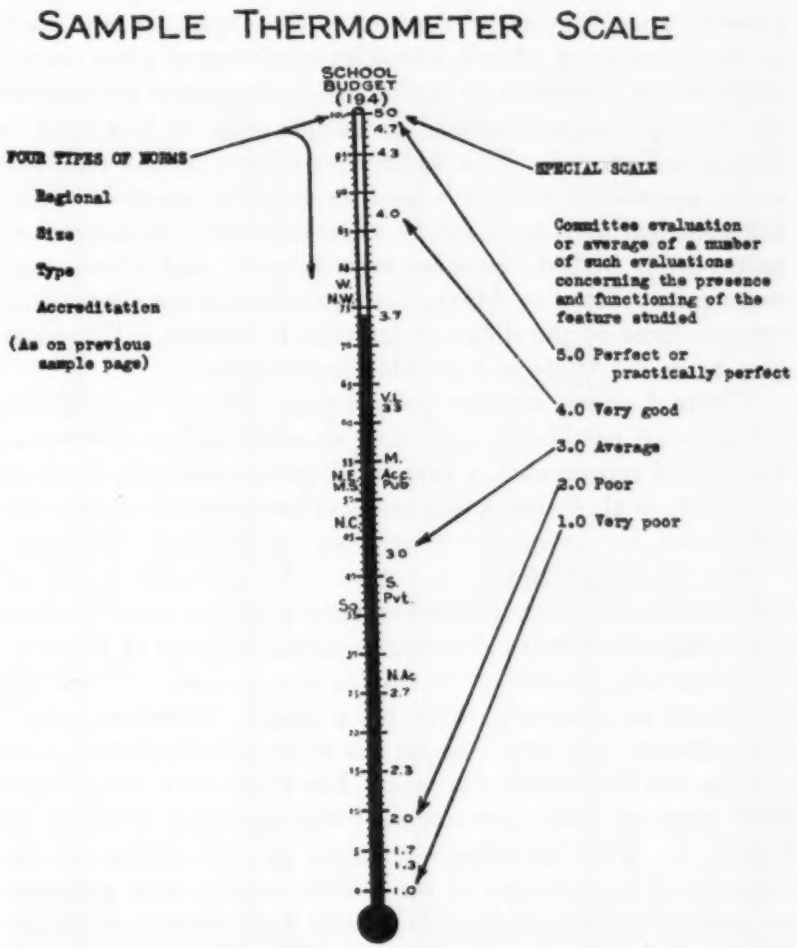


FIG. 6. SAMPLE THERMOMETER SCALE FOR REPORTING SIGNIFICANT PHASES OF MEASUREMENT OF JUDGMENT OF THE QUALITY OF A SCHOOL—BASED ON QUALITATIVE JUDGMENTS

manner indicated in Figure 5 and Figure 6 should be exceedingly interesting and decidedly stimulating to a school. It should also be very useful to a committee passing upon the possible accreditation of a school. We expect to send each of the cooperating schools a booklet consisting of some twenty pages of the thermometer scales, one or two pages for each of the principal areas studied. A sample page of this book is shown in Figure 7. This figure shows for a certain medium-sized, accredited, private school its standing on each of the five principal phases of school administration—organization, supervision, budget, business management, and school and community relations. Marked irregularities in the educational temperatures of the different features is evident. They suggest bases for study and possible improvement.

Figure 8 shows another sample page, one for judging the adequacy of the library according to seven different features. The school represented, a very large, public, accredited one, is very high in all features, but can best look toward further improvement in the matter of recency of its book collection.

The five scales shown in Figure 7 for different phases of school administration will be averaged to secure data for plotting a school's relative standing on administration as a whole, with four sets of similar norms for comparison. These will be shown in summary form on a single "Administration" thermometer, and similarly for the other principal areas covered by the Evaluative Criteria. The form for a single summary page of these nine summary thermometers is shown in Figure 9. This furnishes a compact general picture of the educational temperature of the school, but for most purposes of analysis and stimulation to specific improvement probably the detailed pages for the different fields will be more significant and helpful.

Finally a general summary page (Figure 10) will show each school its relative standing, with corresponding groups of norms, for the seven general measures used in evaluating the school. In this case the nine thermometers of Figure 9 have been summarized into the single thermometer which is

SCHOOL ADMINISTRATION

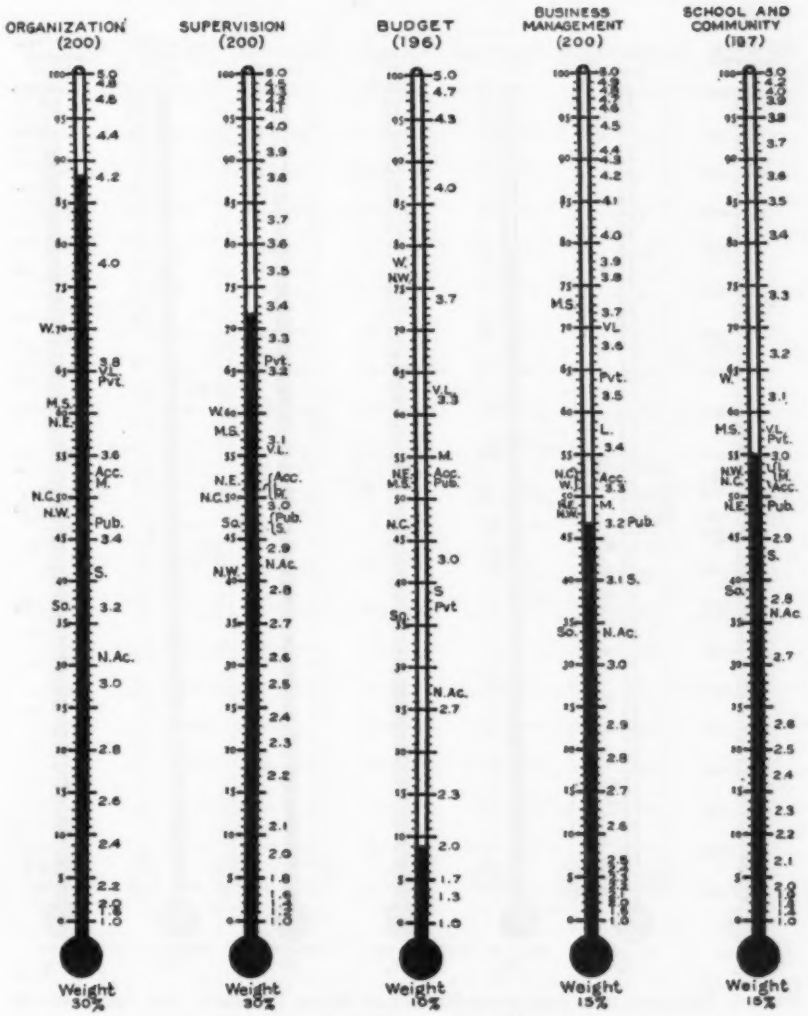


FIG. 7. THERMOMETER SCALES FOR REPORTING THE FIVE PRINCIPAL PHASES OF SCHOOL ADMINISTRATION FOR A MEDIUM-SIZED, PRIVATE, ACCREDITED SCHOOL

LIBRARY - ADEQUACY

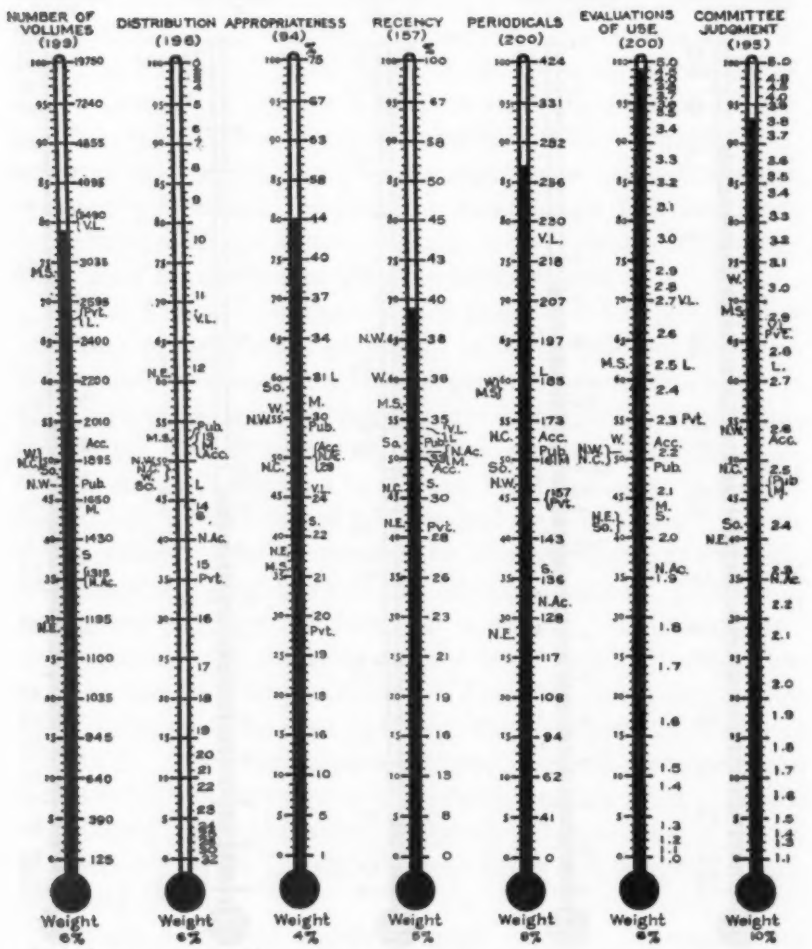


FIG. 8. THERMOMETER SCALES FOR REPORTING SEVEN PHASES OF THE ADEQUACY OF A LIBRARY FOR A VERY LARGE, PUBLIC, ACCREDITED SCHOOL

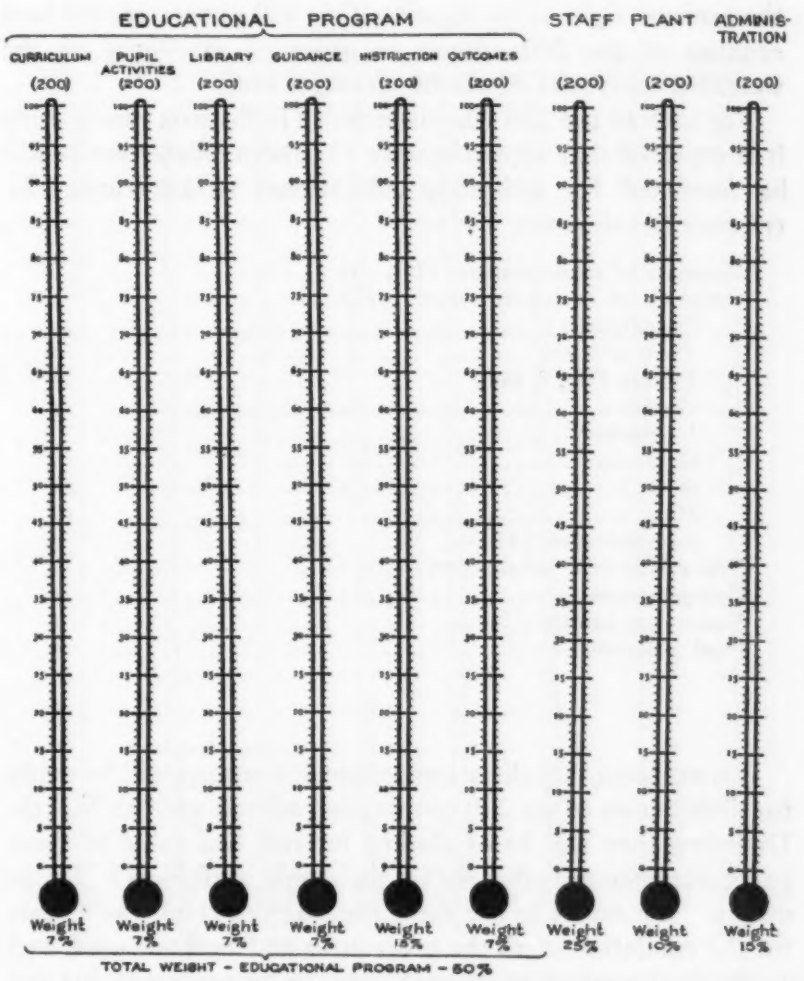


FIG. 9. FORM OF THE THERMOMETER SCALES FOR REPORTING THE NINE IMPORTANT SUBDIVISIONS OF THE EVALUATIVE CRITERIA

the first one of Figure 10. The first seven thermometers in Figure 10 are summarized, using the appropriate weights as shown at the bottom of each, to make a single composite "Grand Total" which will be shown on the thermometer at the extreme right of the figure. This will summarize the final ranking of the 200 schools in order of excellence on the weighted composite of all the measures used.

For each of the 200 schools included in the past year's study it is expected that approximately 138 thermometer scales will be furnished for indicating educational temperatures, distributed as follows:

Summary of seven measures (Fig. 10)	8
Summary of evaluative criteria (Fig. 9)	9
Curriculum	15
Pupil activities	8
Library (Fig. 8, part)	15
Guidance	4
Instruction	6
Outcomes	13
Staff	22
Plant	10
Administration (Fig. 7)	5
Test results (one for each test)	9
College success	3
Non-college success	7
Pupil judgment	4
	138

It is expected that these comprehensive reports will be ready for distribution to the 200 cooperating schools early in March. Doubtless they will be of distinct interest and value to these particular schools. But is this their only usefulness? By no means. We expect to use these summarized results as a basis for the validation of all the procedures and methods used, and as the final method of measurement to be suggested for the accreditation of all secondary schools. It is not expected that all of these methods will need to be used for schools which are later evaluated by these revised methods.

It will, of course, be true that not all of the educational

General Summary of Seven Measures

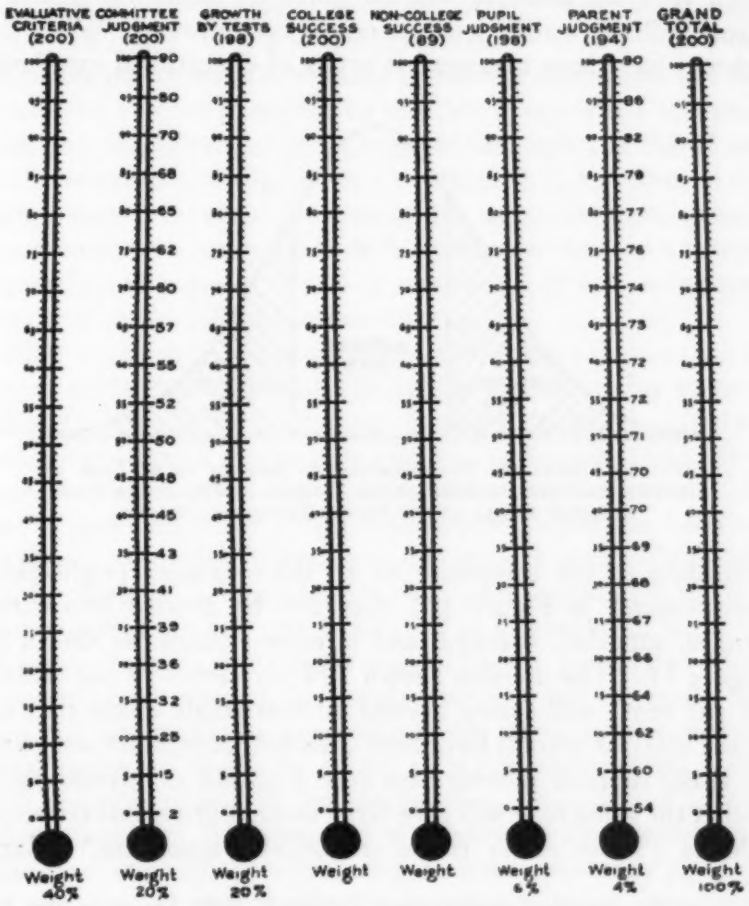


FIG. 10. Form of Thermometer Scales for Reporting the Seven Methods of Measurement of the Quality of a Secondary School

temperatures shown on the thermometers are equally important, and some may be of no significance whatever for purposes of accreditation. Relative weights have been assigned to them on the basis of committee judgment and experience. Ultimately, however, the significance and validity of each separate measure will be tested by statistical analysis. How will this validation process be carried out? When the schools have been arranged in order of educational excellence

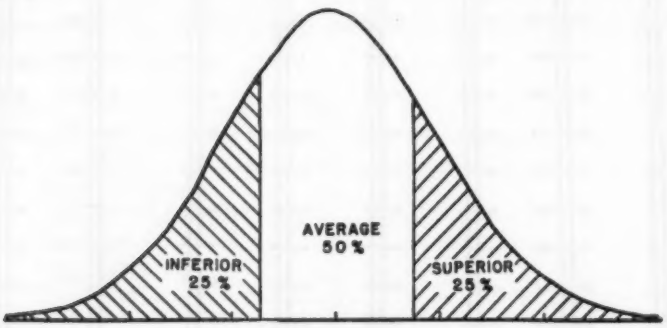


FIG. 11. THREE-FOLD CLASSIFICATION OF SCHOOLS TO BE USED AS CRITERIA FOR DETERMINATION OF THE VALIDITY OF PARTICULAR THERMOMETER SCALES AND OF OTHER TENTATIVE CRITERIA

according to the composite of all the measures (right-hand thermometer in Figure 10) they will be divided into three groups, superior, average, and inferior schools, as shown in Figure 11. The division shown (25 per cent—50 per cent—25 per cent) will assure beyond all reasonable doubt that no really inferior schools have been classified as superior ones and no really superior schools have been classified as inferior ones, and at the same time will give large enough groups of criterion schools (50 in each) to be statistically significant.[4] Each

[4] On purely theoretical considerations Truman L. Kelly has shown that for a normal distribution the optimum division to assure distinct groups of the largest possible size in each is secured when the two criteria groups consist of the upper and lower 27 per cent of the distribution. Convenience for other purposes has suggested the division into upper and lower quarters giving results which are only slightly less satisfactory on statistical grounds than a 27 per cent division.

thermometer scale will be tested by finding the extent to which the feature it measures is characteristic of the superior schools and is not characteristic of the inferior schools. It is expected that some of the tentative scales thus will be proved valueless for discriminative purposes and others may have low validity.[5] Such results will permit a selection of the most valid and significant scales for use in the measurement of a school if it is not desired to use all of those outlined above which are to be used in reporting results to the 200 cooperating schools. It will be possible to select a group, for example, of the 25 or 30 thermometers of highest proved validity, if it is desired to have a very brief scale for a rapid but incomplete evaluation of a school; or a group of 50 or 60 thermometers for a better evaluation; or a group of 100 or more for a more nearly complete and highly reliable measurement.

How can measurements of educational temperature on these suggested thermometer scales be used as a criterion for accreditation? This is an important question, although perhaps not as important a one as how schools can be constantly stimulated toward further improvement once they are accredited. The primary objective of the Cooperative Study has been to develop a measuring instrument for secondary schools which will be more valid, more flexible, and more stimulating to further growth than any now in use. The Cooperative Study is a temporary, not a permanent organization. It is nation-wide in scope of its experimental study, but it is not national. It does not contemplate setting up a single permanent agency in Washington or elsewhere to act as a super-accrediting body with uniform *standards* for the country. It is trying to develop a uniform instrument of *measurement* and *evaluation*. The exact methods by which such an instrument may be used for purposes of accreditation, however, are to be left to the regional and state accrediting agencies. But it is suggested

---

[5] They may still have distinct significance for stimulative purposes. A feature may be necessary and desirable for all schools, even though it does not now discriminate directly between inferior and superior schools.

that a regional agency may properly adopt a general standard that a school applying for accreditation should expect to attain a general average educational temperature on the thermometers used of 20 or 30 or 40 "degrees," but that a low temperature on one scale, depending upon the nature of the feature measured and the aims and conditions in which the school is working, may be compensated by a higher temperature on some other scale. The suggested general level may be raised or lowered in the light of experience and local conditions. These scales are not designed to replace the expert educational diagnostician and practitioner, but to furnish him a more valid and reliable basis for making his diagnosis and prescription. They will not work themselves. They must be worked by sympathetic, intelligent, educational interpreters.

Seventh Annual Meeting of Institutional Members of the Educational Records Bureau

ROBERT N. HILKERT, The Hill School, Presiding

Résumés of Committee Reports

INDEPENDENT SCHOOLS ADVISORY COMMITTEE

Members

Name	*Institution*
Demass Barnes	Shady Side Academy
Mary Helena Dey	Mary C. Wheeler School
David R. Fall	Asheville School
Hart Fessenden	Fessenden School
Ira A. Flinner	Northwood School
Allan V. Heely	Lawrenceville School
Robert N. Hilkert	Hill School
Elizabeth F. Johnson	Baldwin School
John C. Kirtland	Phillips Exeter Academy
Halleck Lefferts	Pomfret School
George B. Lovell	Hopkins Grammar School
Endicott Peabody	Groton School
Harry A. Peters	University School, Cleveland
David R. Porter	Mount Hermon School
Edward Pulling	Millbrook School
R. J. Shortlidge	Pawling School
E. Laurence Springer	Pingry School
Katharine Taylor	Shady Hill School
Dorothy Van Alstyne	Francis W. Parker School
George A. Walton	George School
Charles B. Weld	Taft School
Frank C. Wheeler	Choate School
James O. Wood	Chicago Latin School
Stanley R. Yarnall	Germantown Friends School

Committee on Relations between Elementary and Secondary Schools

Members

Name	*Institution*
Frank D. Ashburn	Brooks School
Thurston Chase, Jr.	Eaglebrook School
Hart Fessenden	Fessenden School
Thomas K. Fisher	St. Paul's School, Concord, N. H.
Halleck Lefferts	Pomfret School
Francis Parkman	St. Mark's School
Clarke W. Slade	Slade School
Everett H. Smith	Shady Hill School
Charles B. Weld	Taft School

Robert N. Hilkert, The Hill School, Chairman, Independent Schools Advisory Committee
Charles B. Weld, The Taft School, Chairman, Committee on Relations between Elementary and Secondary Schools

The first item on the agenda of the joint committee meeting was the question of whether the Educational Records Bureau should offer to provide any of its services to non-member schools; and if so, which ones. After some discussion tending to clarify the nature of the problem, the committee voted to recommend to the Board of Trustees that the Bureau offer to provide its services to non-member schools to such extent and in such circumstances as may be determined by Dr. and Mrs. Wood and the Board. The Bureau is requested to make a report to this committee at its next annual meeting on the extent and nature of the services, if any, provided non-member schools between now and then.

With the intention of crystallizing the purposes and clarifying the objectives of both the Bureau and its constituent members, the committee voted to prepare a new membership blank which shall in effect be a statement of these purposes and objectives and an indication of the extent to which they are harmonious with the purposes of the school applying for membership. A committee of four was appointed to devise such a blank; its members are Dr. Flinner of Northwood, Mr.

Fessenden of the Fessenden School, Miss Johnson of Baldwin, and Dr. Lester of the Friends Council on Education.

A report of the Subcommittee on Reporting Techniques was read by its chairman, Frank C. Wheeler of Choate. The subcommittee recommends that every effort be made to educate school heads and faculties in the use of scaled scores and their interpretation, but that percentile norms be continued also, for at least another year or two. The subcommittee also proposes that when fully satisfactory norms are finally established on the basis of scaled scores they be revised at longer intervals than has been the practice heretofore.

In the discussion of the report of the Subcommittee on Reporting Techniques, it became apparent that schools are increasingly interested in translating E. R. B. test-scores into terms of school grades. Suggestions were given as to useful ways of making the results significant to the students and their parents, and the question of the best method was finally referred to the subcommittee for a report next year.

The chairman of the Independent Schools Advisory Committee appointed J. A. Wheeler of Eaglebrook to fill the vacancy on the Subcommittee on Reporting Techniques occasioned by the resignation of Mr. Nomer.

Mr. Lefferts of Pomfret, chairman of the subcommittee appointed last year for the purpose of determining the best testing date or dates for the spring testing program, reported the subcommittee's decision to recommend March as the preferable date for both elementary and secondary schools. The recommendation was adopted by both committees.

On behalf of the Committee on Relations between Elementary and Secondary Schools, Mr. Weld, chairman, expressed their pleasure in the decision of Mr. Leffert's committee, and also in the increasing interest shown by schools in the desirability of having a uniform admission blank. The report of Mr. Fisher, chairman of the subcommittee for investigating secondary school admission forms was accepted by the committee as incomplete.

Mr. Hilkert of the Hill School was unanimously elected to succeed himself for another year as chairman of the Independent Schools Advisory Committee.

Committee on School and College Relations

Members

Name	*Institution*
Richard D. Allen	Providence Public Schools
N. H. Batchelder	Loomis School
Frank H. Bowles	Columbia Universisty
William L. W. Field	Milton Academy
Josephine Gleason	Vassar College
Richard M. Gummere	Harvard University
Greville Haslam	Episcopal Academy
Francis L. Knapp	Wellesley College
William S. Learned	Carnegie Foundation for the Advancement of Teaching
J. L. McConaughy	Wesleyan University
C. R. Mann	American Council on Education
A. B. Meredith	New York University
Karl G. Miller	University of Pennsylvania
Eugene R. Smith	Beaver Country Day School
John L. Tildsley	New York City Public Schools (Retired)
Stanley R. Yarnall	Germantown Friends School

Eugene R. Smith, Beaver Country Day School, Chairman

The committee did not meet this fall, since there seemed little it could do at this time beyond what was being done by associated committees.

The work that most nearly relates to our interests is being done under the Committee on Evaluation and Recording of the Commission on the Relation of School and College of the Progressive Education Association.

One of the subcommittees on recording has studied existing blanks used by colleges for obtaining information from schools regarding their candidates for entrance, as well as the information various schools were offering to the colleges. As a result, the committee has devised a form for transfer from school to college that includes the most wanted information, and points in the direction of the more advanced reporting

methods that are coming into use. Samples of the blank may be obtained by writing to the Beaver Country Day School, Chestnut Hill, Massachusetts.

Four other subcommittees are engaged in trying to define the information regarding improvements in attitudes, skills, and powers that a teacher in a particular subject field should have in order to report with some authority regarding the changes coming about in the pupils working in that field. This material is not yet ready for distribution.

It is expected that the Committee on School and College Relations of the Educational Records Bureau will consider all this material carefully during the coming year and that it will be ready to make a more extended report in the fall of 1938.

Committee on Tests and Measurements

Members

Name	*Institution*
Richard D. Allen	Providence Public Schools
Ronald S. Beasley	Groton School
Emilie C. Bradbury	Germantown Friends School
Winslow Davies	Buckley School
Rosa Davis	Brearley School
Walter Dearborn	Harvard University
John R. P. French	Cambridge School
Howard V. Funk	Bronxville Public Schools
Donald Goodrich	Calvert School
E. D. Grizzell	University of Pennsylvania
John A. Lester	Friends Council on Education
A. L. Lincoln	Lawrenceville School
Richard H. McFeely	George School
Chester Prothero	Beaver Country Day School
Arthur E. Traxler	Educational Records Bureau
Howard Williams	Western Reserve Academy
Della E. Wood	Radnor High School

John A. Lester, Friends Council on Education, Chairman

1. Report by the Chairman of the Subcommittee on Test Selection concerning the work of the subcommittee in choosing tests for the spring and fall programs of 1937. A report prepared by Dr. Traxler at the request of the subcommittee on "The Use of Tests in the Appraisal of Personality" was also

presented. The committee approved the report on personality tests and recommended that it be published as a bulletin after certain revisions had been made.

2. Discussion of reactions of schools to scaled scores and of how to educate schools in use of them. One suggestion was that it might be desirable for the Bureau to prepare a very simple primer of statistical methods for persons who have little training in mathematics. The point received favorable discussion, but no recommendation was made by the committee. Various elementary textbooks on statistical methods that are now available were mentioned in the discussion. It was pointed out at the conclusion of the discussion that teachers who have no interest in the statistical aspects of scaled scores may use them in the same way that they have been using the raw scores.

3. Discussion of the use of hand-scored and machine-scored tests next spring. It was pointed out in the discussion that since only a small proportion of the Bureau's total overhead can be attributed to costs of scoring tests, the use of machine-scored tests would not result in a very large saving for schools using Bureau scoring. No definite figures on relative costs were given.

4. How shall tests for spring, 1938, and fall, 1938, be selected? The committee decided to reappoint the Subcommittee on Test Selection to choose the tests in conference with th Bureau staff.

5. Report by John Flanagan, chairman of the Committee for the Construction of a General Mathematics Test for the Junior High School Level. This committee was appointed last spring and has made a promising beginning on the problem of constructing a general mathematics test in line with the objectives which a wide sampling of the Bureau schools believe to be important for junior high school mathematics. The attack on the problem of test construction in mathematics will, we hope, show the way for the construction of new and needed tests in certain other fields.

Public Schools Advisory Committee

Members

Name	*Institution*
Richard D. Allen	Providence Schools
Frederick H. Bair	Bronxville Schools
Paul D. Collier	Connecticut Department of Education
John C. Flanagan	Cooperative Test Service
Roy S. Haggard	Fitch High School, Connecticut
Galen Jones	Plainfield High School
W. S. Learned	Carnegie Foundation
E. F. Lindquist	University of Iowa
Albert B. Meredith	New York University
Lester W. Nelson	Scarsdale High School
Sydney V. Rowland	Radnor Township Public Schools
James N. Rule	Langley High School
John L. Stenquist	Director of Research, Baltimore
Howard D. White	New Jersey Department of Education
E. G. Williamson	University of Minnesota

Albert B. Meredith, New York University, Chairman

The meeting was called to order and an announcement made that Sydney Rowland, superintendent of Radnor Township Public Schools, had been nominated and elected to serve as representative of the public schools on the Board of the Educational Records Bureau for a period of three years.

Mrs. Hawkes made a brief report on her visits to the project schools during the preceding year. Her observations indicated that the fundamental ideas that the project was intended to emphasize had been incorporated into the schools. Dr. Traxler discussed the organization and content of Educational Records Bulletin No. 21, "The Public School Demonstration Project in Educational Guidance." This bulletin, which was published just preceding the date of the meeting, consists of a report of progress during the first three years of the project.

Representatives from six of the seven schools cooperating in the project had met earlier in the day to discuss their common problems of measurement and guidance. These representatives were invited to attend the meeting of the Public Schools

Advisory Committee and to summarize the work of the project in their respective schools.

M. C. Gallagher, superintendent of schools at Billings, Montana, reported three results of the project in Billings. (1) The project has tended to break down the isolation that exists in that part of the country where there is no other system within a radius of 120 miles comparable in size or problems to the one at Billings. (2) A spirit of cooperation and understanding between the teacher training institution in Billings and the public school system has grown out of the work. (3) It has been possible to begin in a small way an opportunity school which will make a careful study of the individual who is a misfit.

Roy S. Haggard, principal of the Robert E. Fitch High School, Groton, Connecticut, reported that his school has used the tests and records since the opening of the school eight years ago when Dr. Wood attended the first faculty meeting. Every student who has gone through the Robert E. Fitch High School has had a cumulative record. The object at present is to expand this program and increase the personnel as additional funds are received. With a full-time trained person in the school, it would be possible to increase the availability of the material and to make it more valuable to the school. Through a monthly parent study group, a large number of parents have come to understand the problems and are wholeheartedly back of the school. Mr. Haggard reported that plans were under way for an enlarged state-wide testing program in Connecticut under the leadership of J. R. Gerberich.

Galen Jones, principal of the Plainfield High School, Plainfield, New Jersey, whose program is discussed most fully in Bulletin 21, told of three types of activities which had been begun almost simultaneously in Plainfield: (1) programs of testing in fall and spring; (2) cumulative records; and (3) guidance service. The most tangible results of the program thus far have been in teacher orientation and curriculum revision. Dr. Jones felt that in the future the major emphasis

should be on the education of the teachers in the purposes and techniques of the guidance program.

Lester W. Nelson, principal of the Scarsdale High School, Scarsdale, New York, spoke of the results of the project in four major directions. (1) The project has been influential in improving and expanding the curriculum. (2) The project has assisted in the improvement of instruction. In the senior high school, an honors course has been developed for the superior group. In the junior high school, a remedial program in reading and mathematics has been organized. (3) A committee has been working during the past year on a new cumulative record form and has virtually completed plans for starting cumulative records this year. (4) The project has fostered growth of group and individual guidance centered about home room teachers. One of the most difficult phases of the work has been the constant necessity for teacher training. The results, however, have been encouraging, for more and more the teachers seek to consult records and to discuss cases.

Thomas B. Portwood, assistant superintendent of schools, San Antonio, Texas, reported that they were trying to make it possible for every teacher to learn something and to do something about guidance. The program was started in his city in a junior high school of 1,200 pupils which feeds a senior high school of 2,000. An attempt has been made to carry along all the schools in the city. A new record system has just been planned by the teachers. This new system will follow the student through his eleven years of school. Mr. Portwood also mentioned certain by-products of the project, such as changes in pupil reports and tendency toward abandonment of the academic mark.

Belva L. Snodgrass, principal of the Rochester High School, Rochester, Minnesota, told of four influences of the project within the school. (1) Better classroom teaching has been stimulated. (2) Departmental meetings have been developed which provide for growth of teachers while in service. (3) The parents and community have a better understanding of the work of the school. (4) A Personality Traits Record has

been developed. Outside the school, the project has resulted in testing not only in high schools, but testing in junior colleges. At a panel discussion at a state meeting on guidance work it was emphasized that the colleges and universities could and should do much more than they are now doing to lighten the burden of high school principals in training teachers in guidance work.

An important point brought out by the various reports was that the programs of measurement, record keeping, and guidance developed in the different schools were serving as models for similar programs in other schools located in the same regions.

After the reports from the representatives of the project schools had been discussed, the work of the project for the present school year was considered. Dr. Traxler read from letters that he had sent to the project schools, in which he made two suggestions to which the schools had expressed favorable reaction. The suggestions were as follows: (1) to have a case study made by each teacher for one pupil, and (2) to have a record kept of the number of times each cumulative record is used and of the use to which the record is put.

Various members of the committee commented on the value of the work of the project in indicating the direction that future development of the work of the Bureau in public schools should take. The consensus of opinion seemed to be that the formulation of a definite policy with regard to Educational Records Bureau service for public schools should wait until the end of the demonstration project.

Symposium

Experiences of Schools Holding Membership in the Educational Records Bureau

AN INVESTIGATION OF WHAT EDUCATES AT THE COLLEGE LEVEL

FROM the opening of the college ten years ago, we have been discussing methods, courses, programs most useful to freshmen. It became clear that our teachers had very differing ideas of what a freshman was. We realized that we would really have to try to find out. We were pretty well agreed that freshmen were not very rational, that they were immature, that they were fun to work with because they were unaccountable; but these generalizations offered very little help in actually dealing with them. We decided to study them and we began in what now seems to us a naïve and rationalistic manner. The history of our investigation is an amusing one.

We began with a "Personality Rating Scale" which appears now to have been made up out of our own heads—a very reasonable picture of a freshman. Each faculty member working with a student checked it several times a year. The results showed very little information about students, but a great deal about faculty. The disparity in the faculty's estimates of qualities and attitudes was extraordinary.

The value of this attempt was largely to stimulate a small group of people to find something more useful. We tried next a long report from advisers with a large number of items referring to student behavior and with a "Yes," "No," "Do Not Know," to check for each item. The items were still reasonable, the faculty very honest; but a very clear picture of a student did *not* emerge.

This was followed by a report from advisers with many fewer items but with each item followed by questions which would be a guide to the adviser, yet allow him more freedom in answering than the check lists had allowed. The results appeared somewhat more real, but there were still great differences between the reported student and the student who actually appeared in conference or class. The freshman had not yet come alive.

Finally was made the suggestion of keeping running records of conference interviews—simply putting down what had occurred. This seemed radical and, to some, frightening because they thought it would make the advisers or teachers self-conscious. Nevertheless, a group of teachers decided to try it. But they began in the same arbitrary rationalistic manner. They got together in a committee! They tried to decide ahead of time just exactly what kinds of things they would try to observe. But this desire to be ahead of themselves and of the people they were going to observe defeated itself, for they soon found they could not in the least agree as to what the important items for observation should be. Hence, they finally decided to take records without preconceived plan. The real facts soon began to emerge.

It took a year or more for most of us to get the arbitrary, *a priori* characteristics out of our heads. The record keeping proved of inestimable value to the teachers themselves as it gave them a much sharper idea of what they actually did. The fear of self-consciousness appeared to be merely a bogey. Gradually these teachers began to see their students as active, functioning persons, not as sums of items—so much of B, plus A, minus C.

It was this process of learning to keep records which modified the Cumulative Record form used in the central office. Gradually we were able to work out our own simplification of this folder. We began to fill it up with summaries of information from the records themselves. The regular teachers' reports became more specific. We have practically abandoned the scheduled items on the folder itself.

The running records were soon extended to cover some group discussions. We experimented with students' records of these discussions and students' work sheets which gave their readings and their own brief digest of the discussions and their own opinion of the subjects in discussions which they wished to see carried further. These have varied greatly with different teachers and with different materials; but they have given in many cases very illuminating facts about the way different students think and how much of a general discussion registers with them.

We are just beginning to discover the value of drawings, paintings, sculptures, and creative sketches in illuminating the attitudes and temperamental biases of students—sometimes physical defects. Autobiographical papers have also proved useful for this purpose if worked into regular sequence of materials and not stressed as important. On the whole, these indirect ways of getting information about our students have proved far more valuable than any direct questionnaires, or interviews in which direct questioning is used.

We are, however, making a slow but careful study of a number of different tests such as the Bernreuter, the Allport-Vernon, the Strong Interest. We have used the American Council ratings for admissions for some time. We recognize the fact that the long records are uneconomical and we cannot hope to continue them; but we shall probably continue to ask new teachers to try taking them, for in nothing else so far has the behavior, the dynamic character, of a student emerged so sharply. We are now seeking more economical methods; we must find them. But our use of the usual short cuts or condensations based upon *expected* items has not proved very fruitful.

We hope from a comparative study of various tests with our own running records to discover some constant repetition of characteristics which may provide an empirical basis for schematization. The first attempt in this direction was made this last spring in the form of a questionnaire largely focused on student behavior and attitude which some faculty members

were asked to fill out. The results appeared to correlate closely with the long records and throw sharply into focus the predominant behavior patterns of individual students.

Perhaps the most significant thing resulting from our labors in these directions is the change in faculty attitude. Those who have worked in the records have become much more humble in their expectations or demands of students; they are far less certain about what they may expect to find the student is like.

From the records, tests, examples of different kinds of work, and other sources of information, we have got much more material than we can as yet interpret. But we are not now seeking immediate generalization. We are looking for specific things to take hold of in directing a student's work. To observe generally that Mary or Susan is not very mature, that the one is unreasonable and the other is quite grown up, is not very useful. But to discover, for example, that Mary works with interest in social science over materials that are familiar, close to home, that have analogies to her own environment, is a useful fact; and to find that Susan tries to avoid these materials and responds to books and discussions about things remote, unfamiliar and strange, gives a basis and a possible goal for working. Thus to find that one student appears to be intensely interested in ideas or theories and listless or indifferent to the facts which back them up, while another responds to the demonstration of facts and tends to be indifferent to the general laws to be inferred, again offers the teacher a ready means of approach and a goal toward which to work.

In noting these facts and then experimenting with them we have found several specific things about a student's development or progress in learning. For example, the first reaction of some teachers was to attempt to supply directly the want in a student's habitual way of thinking. The girl who was so enthusiastic about general ideas and so vague about facts was asked to find the facts, or was encouraged to take a course planned to correct the bias. The literal girl was encouraged into courses which dealt with imaginative or theoretical ma-

terials. What happened in these cases was a loss of interest or, under pressure from the teacher, a pretense at achievement —a perfunctory kind of learning which was soon forgotten. In many instances an increased nervousness was apparent and in some cases an hysterical worry about the progress of work.

Various experiments have shown however, that a great deal may be done by taking the temperamental bias as the basis of program forming and proceeding slowly in the direction of filling in the want in the student's thinking. For example, if the literal-minded girl is encouraged to form a program which is roughly two-thirds composed of factual courses or skills such as laboratory, studio, or language, she finds things which satisfy her and give her the necessary sense of achievement. She is much more ready to venture for the other third into a field that is theoretical or imaginative. So too, the pressure by the teacher in working with her may be much more strong in the areas she feels are "natural" to her, than in the reverse. The same principle applies to a number of other distinctions or characteristics. Records show that careful program guidance and teaching based upon the recognition of these individual differences avoid failures and tend to lessen anxiety and nervousness on the part of the students. But we are much less certain of the degree and the rate of development of the qualities or capacities which the student lacks. In some cases the development appears rapid and marked; in others, the student appears to remain fixed—limited to one kind of thinking or to one sort of attitude.

One may well ask why? This question has forced us further into the study of emotional factors in the learning processes of the students we are dealing with.

Investigation again has not produced many generalizations. We have, however, uncovered several specific facts useful to guidance. It is clear from records that students differ profoundly in their reactions to authority. Some appear to need severe authority for their best work, they need elaborate and precise direction; others tend to resent direction, to be defiant; still others vary or appear confused or inconsistent. They

want praise or criticism, yet they are uncomfortable when they get it.

Not only are the reactions to teachers as differing types of authority marked, but these carry over to kinds of courses. Certain students will work with great success in courses which impose much responsibility on the student, in which the group does much of the planning. Others appear to need to work under a clearly defined framework with precise indication by the teacher of where they are going.

Again we find that for certain students it seems important to work with teachers who have a kind of campus prestige; other students avoid these teachers or are indifferent to the whole matter. Even further, these attitudes toward authority carry over to the printed word. Some students attach inordinate importance to print, to books, to names and tags; others have to be shown in order to believe or to become genuinely interested.

We do not pretend to know the complex sources of these attitudes. We are just beginning to be aware that they have their roots in family relationships, in social situations of security or insecurity, sometimes in physical conditions. We are carrying this study further. But we are beginning to learn how to recognize these attitudes and to make use of them in directing the individuals. For example, we have learned that we cannot demand the independence in work from a compliant, dependent girl which we had tended to expect from all. Nor can we expect the precision, accuracy, or careful following of rules from the defiant or hyperactive girl that we should like to demand of "all college students" as a theoretical classification. Pressure in these directions results in pretense on the part of the student to meet the demands which are from the point of view of learning very specious indeed. Pressure may also result in increasing the very individualism and eccentricity we hope to modify. Much the same principle of proportionate pressure appears to be useful as in the cases of different responses to materials already described. To give the headstrong enough but not too much rope appears to increase the

learning process; to supply the timid with sufficient protection, or direction, and very slowly to encourage them to independence appears to be helpful.

In this connection we have found the study of method in itself of comparatively little value unless such study is made relative to what we know *specifically* about students. From rather bitter experience we have learned that methods which appeared to work produced perfunctory or deceptive results, while others which appeared to be getting nowhere had, when actual records of individuals were studied, developed capacities one could not foresee. Methods of teaching, it appears, were relative to the situation, and that situation was a human one; it appears to be controlled by emotional attitudes which, whether they are recognized or not, are the dynamic factors of the learning processes. I say *processes* because the facts, if recognized, point to a great many ways of learning, equally good for different people, each clearly relating to the prevailing characters of these people.

The significance of this study of freshman year on the rest of our curriculum is just beginning to become apparent. We are beginning to find out the kinds of interests stimulated by the exploratory type of courses which, under a grant from the General Education Board, we are offering all freshmen. The implications of the facts about emotional behavior and attitudes, the varying capacities for independence, are being followed up in continued records on students we already know a good deal about. We find that they *do* change; their attitudes become modified—not always for the better! But we are putting off generalizing about their development. We are certain now that what conclusions we may reach about the progress of learning through the four years will very much depend upon the effectiveness or wastefulness of empirical records and investigation.

Thus we are concerned at present with this problem: What kind of records or tests tell us most in the most economical way about the individuals we are trying to teach?

The shaping of "custom-made programs" for individuals

or the shaping of the curriculum itself, in the advanced years, will depend primarily upon how fully we can get at the facts.

If there is any final answer to what educates on the college level we have not yet got it. But we can indicate the directions of inquiry. It is not that we have new methods, practices, or systems at Sarah Lawrence College, but that we are taking the same old problems with fresh seriousness; trying to redefine some of them in the light of facts about students which we may have overlooked or known all along without recognizing.

The direction of our inquiry points toward increasing awareness of the fact that a student is a person living in a culture, that what educates has a relation both to the individual person and to the cultural pressures operating in the group from which the individual comes; or the corollary of this, that the effect of courses planned without specific relation to the needs of the individuals being taught is quite unpredictable.

Thus our educational intentions are tending to be less ambitious, less centered upon developing individualism or exploiting individual prowess; much more upon discovering what learning and discipline is realistically possible for this or that individual in a given social or cultural situation.

CONSTANCE WARREN

INDIVIDUALIZING THE CURRICULUM

BETWEEN 1932 and 1936, and in connection with our membership in the Eight Year Study of the Progressive Education Association, George School has been gradually introducing a new program of three-year sequence curriculums alongside of a college preparatory curriculum of conventional units and similar to those usually found in secondary schools. The plan is applicable only in a school large enough to have five or more sections in each senior high school grade and which has the opportunity to select pupils who fit.

The plan is based upon the observed experience of adolescents, who find their first adult intellectual stimulus in a single field of study or in its relationships. Other studies come alive

as a result of genuine growth in a particular field. If an especially fortunate individual at the end of the junior high school has started to grow upon the adult basis in two subjects, one will be outstanding. Its cultivation offers the most favorable road for education. If another pupil enters senior high school without a valid start towards intellectual maturity, a clue can often be discovered that can be profitably followed in arousing latent intellectual interest and power.

George School has four so-called sequence curriculums, each built around a central subject and a dominating interest. Each provides for a continuous study of four fields throughout three years, interrelating these fields wherever the way appears open. The objective is that the pupil shall look upon learning as a continuous process and realize that all learning has a significance, either for the immediate interests of daily life or for other studies. The personnel of each group is continuous, both of teachers and pupils, throughout the three years. We have named these curriculum groups "sequences," recognizing that it does not express their purpose fully. The sequence of subject matter within a given field is, however, a more prominent feature than correlation of separate fields, and so justifies the name.

One centers in languages and mathematics, another in science and mathematics, two others in the social studies. We find a few pupils for whom the dominant field is in the arts, but lack the resources needed for constructing a curriculum about such a nucleus.

From the language sequence, started in 1932, eight pupils were graduated in each of the last two years. There are seventeen now enrolled in the twelfth grade; twelve in the eleventh grade; twenty-four in the tenth grade.

The first social studies sequence, introduced in 1933, is for college preparatory pupils, with one modern language included. There were ten graduates in 1936, sixteen in 1937. The class of 1938 includes sixteen members of this sequence, the next two classes eighteen and twenty-three each.

A social studies sequence for slow readers was introduced in

1934 and graduated eleven members in 1937. The present enrollment is sixteen, fifteen, and twenty-three, respectively, in the three upper classes.

The mathematics-science sequence was introduced in 1936. At present, there are twelve members in the class of 1939 and nineteen in the class of 1940.

There is a core of subjects common to all four sequences, but no common body of subject matter. Each sequence includes English and the study of religion throughout. The content varies according to the demands of the particular curriculum. Physical education is required of all pupils and no effort is made to adapt it to the individuality of the sequences. Likewise, several courses are offered for election in the field of art or expression. Each sequence pupil must take one each year. The offerings are: freehand and mechanical drawing, woodwork, household arts, journalism, dramatics, and in music, chorus, orchestra, or music appreciation.

A tenth-grade attainment in English is the only entrance requirement common to all four. The language sequence requires such a mastery of Latin and algebra as is usually acquired by good pupils in a year. The mathematics-science sequence has the same requirement in algebra. For the others, the requirement is credit for ninth-grade work.

In the language sequence, pupils get Latin, French, and mathematics, for three or four years. We conceive it as part of a cooperative plan in which both school and college participate, enabling the pupil to concentrate in the secondary school on languages and mathematics, the tools of learning, and for two years in college to concentrate on the social and natural sciences. The attitude and experience of college faculties have influenced the development of this plan. They express little respect for secondary courses in science and history and insist that pupils cover the same ground again, if they find their major in these fields.

College work in languages and mathematics looks upon secondary school courses as prerequisites. Placement tests, especially in English and languages, attempt to discover the pupil's

actual attainment, and if high enough, he is credited with the minimum requirements for graduation.

Every language sequence pupil is potentially a candidate for exemptions from the usual freshman courses. If we succeed in qualifying only the abler ones to reach this level, we have, we think, done all the pupils of the sequence a distinct service.

There are two options allowed to seniors in the language sequence, dropping Latin after three years and taking physics, or omitting the fourth year of mathematics and starting in the social field with United States history.

We are quick to resist the argument that this curriculum should be thrown out of progressive circles because it consists of the traditional studies. The objective is not to be modern, but to serve the best interests of a certain type of pupil. There are, as every schoolmaster knows, certain precious individuals who prefer to school themselves in subjects which have for a long time nourished the growth of many of the best minds. To require all pupils to take such a curriculum would be professional malpractice of the worst sort. To afford the opportunity to those who will be challenged by it and for whom it provides the most efficient medium of learning scholarly habits is plain common sense.

The experimental feature of this curriculum is in connection with developing social attitudes. Are such school courses the only way to lead boys and girls to become socially minded? May not equally desirable attitudes develop through studying the traditional subjects with socially minded teachers, and in a school in which visitors, assembly programs, and religious exercises are fertile in social stimulus?

The social studies sequence is built upon the fact that the dominating intellectual interest of certain boys and girls is to be found in the political, social, and economic problems of contemporary society. Considerable correlation springs up between history and English and history and the study of religion. A fusion of mathematics and science is also carried as a full-time study. There has been considerable correlation of the history of science and mathematics with that of history in

general, which has in several cases resulted in the desire of certain individuals to have a full systematic unit course of study in one field of science or the other. This has been met administratively by making possible the substitution, in the senior year, of a college preparatory unit in chemistry or biology instead of the fused course in mathematics-science. French or German is also included in this sequence, with less emphasis upon grammar and writing English into the foreign language, concentrating upon the early development of reading ability so that some contribution can be made to history and social problems from French or German sources. The quantitative result of this correlation is small, but from a qualitative standpoint it is highly significant. It gives frequent demonstration that the study of a foreign language is not a set of isolated exercises, but of real value to interested students.

A second social studies sequence, without foreign languages and with a minimum of abstract mathematics, is offered for slow readers or other pupils whose aptitude appears to be lower than the college level. Work is undertaken in the four fields of English, mathematics, science, and social studies. Of vast significance to the education of citizens of a democracy this sequence figures little in the college world at present. That such a group of pupils has a natural place among those working for a liberal education is seen by the fact that this sequence provides our teams with captains and our boys with sweethearts. Our only graduates of 1937 to be asked to read original papers before the local historical society, to allow the use of personal letters in a fund raising campaign, and to find places as members of our faculty this year were members of this particular sequence. The higher education of these pupils is a pressing problem, with which the colleges of New England and the Middle States have made little progress.

From 1933 to 1935, we observed that some pupils who did not respond to the emphasis on social studies were hungry for mathematics and natural science. This led to planning a mathematics-science sequence, introduced first in 1936, in which a correlated study of mathematics and science is attempted for three years. A modern language, French or

German, is available during the first two years of the sequence. The study of social problems may be substituted if language seems inadvisable. During the third year of the sequence, a course in United States history and government is to be included. This sequence differs from the others in that there is less free election in the field of art. Three sequential years in mechanical drawing, wood and ironwork are available, correlated with mathematics at several points, and in practice taken by most of the pupils. A similar sequence in home economics is available for girls, but with less correlation with the other studies.

A word remains to be said about the most highly individualized aspects of this plan, that is, educational guidance and independent projects.

We have pupils of similar aptitudes and with similar college and life purposes grouped together to follow a unified, continuous curriculum. With their instructors, they work together for three years. They are not governed by requirements for completing units in anybody's system. They may go as far as they can, and in subject matter that is best adapted to their accomplishing the purpose of the sequence. Having the same dominating intellectual interest, and gaining a common vocabulary and fund of knowledge, they learn much by discussion with each other. Recitation plays a decreasing part in class sessions.

Teachers confer with one another at regular intervals to study their pupils and plan their work, thus helping each other in a more thorough understanding of their charges. One teacher serves as head adviser of the pupils, holding frequent interviews with them, and collecting the data on which reports to parents and colleges are based. The relation of adviser and pupil is less individualized than that of father and son but far beyond the usual bond of teacher and pupil.

This situation readily permits certain students to proceed individually at a faster pace, or to work upon an individual or small group project, in the light of his needs and desires, as well as of the general plan of the sequence. The sum total of this independent work has never been calculated in exact

terms. It is not great in a quantitative sense, but qualitatively it demonstrates to all the truth that learning is an individual process.

GEORGE A. WALTON

A REMEDIAL READING EXPERIMENT

FOR the past five years the Bronxville Junior High School has been offering remedial instruction to children coming into its seventh year whose reading score on standardized tests indicated a reading deficiency or a reading difficulty. The number in this group varies from year to year—but in general it includes twelve to twenty children. All those whose reading score indicates them to be below grade placement are scheduled for the special instruction. When the number of children selected by this method is too small to warrant the full time of a teacher the figure is stepped up beyond the beginning seventh grade, say 7.4. By and large the group so selected will fall in the lower quartile of the seventh grade in general ability, although almost every group contains one or two exceptions, that is, people who are having difficulty of some kind in their reading technique not generally traceable to native capacity.

The reading range in our beginning seventh grade varies greatly, as does the general ability range. This is a fair sample of the range in reading and ability:

TABLE I

General ability (by group tests) 80-136

Reading ability (New Standard Achievement Test grade equivalents(5.3-10 plus

Distribution of Reading Ability

10.0-10 plus	22
9.0- 9.9	21
8.0- 8.9	16
7.0- 7.9	28
6.0- 6.9	9
5.0- 5.9	4
	100

Rather arbitrary standards are set by which students are admitted to the remedial group and by which they will leave it. Our procedure is as follows: Achievement tests are administered to all sixth-grade students the last of May. These test results are checked against past achievement and against the student's general anecdotal record, to see that the results are in line with expectancy. The reading achievement is then ranked from high to low in terms of grade equivalents. From this are selected the children whose scores indicated their reading achievement to be below seventh-grade standard and who apparently need and can probably benefit from special instruction.

The group is taught by Mrs. Georgia Matthaei who is the educational counselor and psychologist for the elementary grades. This means that oftentimes the problem has been recognized and special individual instruction has already been given previous to entrance in the seventh grade. Now it is simply a task of supplying the same type of help in a somewhat different setting and on a bit more mature level. The group meets for one regular class period a day, five days a week.

I shall not attempt to describe in detail the work carried on in the class itself. In general it consists of reading for all types of purposes, of group and individual reading, and of attacks upon specific individual difficulties. A recurring testing program is given regularly and frequently so that a student may see his own difficulties and judge his progress at overcoming them at fairly short time-intervals. Recognition of one's own difficulties and the desire to overcome them are of prime importance to any remedial program.

The length of time a child remains in the group is determined entirely by his achievement. Since the majority of the group ranks in the lowest quartile of ability it seems fair to say that when their reading achievement matches their present grade placement with consistency they may be allowed to leave the reading group for some other activity. This achievement is judged on a battery of reading tests, not upon

a single test, and the reading grade equivalent must equal or exceed the child's grade placement over a period of time before he can leave the group.

Some of the children reach the goal set before the end of the year, but usually most of the group remain for the whole two semesters. Sometimes but little gain is to be noted as a result of a year's work, but, in general, there is a very measurable increase in reading ability.

As an illustration, the group which began this reading instruction in September 1936 can be summarized as follows:

TABLE II

Total enrollment in beginning seventh grade ...	100
Below grade placement in reading	13
Number in remedial group	13

Reading Achievement of These Thirteen Pupils

June 1936:	Average 6.7	June 1937:	Average 8.2
	Range 5.3-8.1		Range 7.3-8.7
Sept. 1936:	Average 6.7	Gain:	Average 1.5
	Range 5.7-8.0		Range 0.6-2.6

Analysis of the individual records for the year indicate two interesting trends: (1) the best readers tend to make the least gain during the year of remedial instruction, and (2) the poorest readers tend to make the largest gain during the year of remedial instruction. This is probably to be accounted for by the general capacity of the individual to learn to read better. Those who read at or above grade placement are probably working more nearly to capacity than are those who read below or considerably below grade placement. In other words, there is less discrepancy between individual ability and achievement of the better readers than is the case with the poorer readers. Since very definite stress is laid in the class on the attitude of the child toward his difficulties and his desire to overcome them, it is likely that this factor has some influence.

Only four of the thirteen children were below eighth-grade level in reading in June 1937, when they were 1, 1, 2, and 6 months below grade placement, or beginning eighth grade with a net gain for the year of 1.4, 1.7, 2.0, and 1.4 years, respectively.

In short, by the end of the seventh year, with these exceptions the students all had a reading achievement at or above their grade placement. There is some variation in pattern from year to year, but since the problem is essentially the same, like procedure is used and the same results are to be expected from each class.

So far only the short-time results of our remedial program are indicated. Judged on this basis the results appear to justify the instruction.

Inquiry must now be directed toward long-time results. Two questions arise in this area: (1) When children are brought to or very close to grade placement in reading achievement at the end of the seventh year, does this condition continue into the future or is there a regression in reading achievement? (2) Do these children read and continue to read as well as their general ability indicates might be expected?

The present junior class in high school contains the first students for whom we have continuing records. One or two groups were given remedial instruction before them, but we were then refining procedures and the records are not accurate enough to be reliable.

There are now in the present junior class eight students who had remedial instruction in the seventh grade in 1933-34. They have had a regularly recurring battery of tests administered yearly under the supervision of the Educational Records Bureau. The cumulative records are accurate enough to be reliable. Different forms of the same tests have been administered again this fall, but the results are not yet available. Therefore we have the results for the ninth and tenth years to consider now:

TABLE III

Student No.	Seventh Year (June 1934) Reading Grade	Ninth Year (Oct. 1935)			Tenth Year (Oct. 1936)		
		Reading Grade	Reading Percentile (local)	A.C.P.E.[1] Percentile (local)	Reading Grade	Reading Percentile (local)	A.C.P.E.[1] Percentile (local)
1.....	7.6	9.4	9	6	10.6	8	3
2.....	7.8	8.3	2	22	10.2	4	25
3.....	8.2	10.6	24	5	11.5	15	4
4.....	7.8	9.8	28	23	11.8	13	22
5.....	7.9	9.4	7	22	11.5	15	9
6.....	6.6	9.6	11	4	11.3	13	6
7.....	7.9	9.2	8	10	13.3	56	45
8.....	8.0	8.7	5	1	10.8	9	1

[1] American Council Psychological Examination.

Since the Iowa Reading Test and the American Council Psychological Examination are given about October 15 of each year we are justified in saying that a ninth-grade equivalent of 9.1 is at grade placement and that a tenth-grade equivalent of 10.1 is at grade placement.

Accordingly only two of the eight people in Table III are below grade placement in reading achievement at the ninth grade and none is below grade placement at the tenth grade level. With but one or two exceptions there is a very close correlation between general ability and reading ability. Since the ability test used is largely a reading test, this is to be expected. Therefore, this correlation may be accepted for whatever it is worth.

The number of individuals considered here is probably too small to be highly significant, yet the results seem uniform enough to be indicative.

There are in the present tenth grade seventeen students who had remedial reading instruction in 1934-35. They have taken exactly the same battery of tests, and results for the seventh and ninth years are equivalent to those available for the juniors previously mentioned. These pupils, too, have taken the Iowa Reading Test as tenth graders, but the

results are not yet available. The information at hand now shows the following facts:

TABLE IV

Student No.	Seventh Year Reading Grade (at end of year)	Ninth Year		
		Reading Grade	Reading Percentile (local)	American Council Psychological Examination (local)
1.....	9.7	11.0	15	16
2.....	9.0	13.1	60	31*
3.....	8.9	11.3	20	20
4.....	8.6	11.0	15	21
5.....	8.4	10.2	9	10
6.....	8.3	12.0	37	47
7.....	8.2	10.1	8	7
8.....	7.9	10.1	8	9
9.....	7.8	8.2	2	7
10.....	7.8	11.5	27	4*
11.....	7.8	10.0	7	52*
12.....	7.8	8.8	3	19
13.....	7.8	11.3	20	58*
14.....	7.7	9.8	6	18
15.....	7.5	10.5	11	73*
16.....	7.4	9.0	4	1
17.....	6.5	(*Too low to score*)	1	1

There are five cases (starred) in this group where the difference between ability and achievement indicates that a further check should be made on the results. It is likely that such a check will show a discrepancy in either the reading score or the ability score. The annual testing program will probably eliminate this and yield completely reliable data before the end of high school. Of this group four individuals have a reading achievement which is less than their grade placement. A year of intensive work in the seventh grade had also failed to bring these same individuals up to their grade placement. The results otherwise have exactly the same general trend as do the results for the junior class group.

From the data presented, it is possible to make some ten-

tative conclusions, subject to the verification of further tests given at regular intervals in the child's secondary school career:

1. Proper remedial instruction during seventh grade will enable poor readers to attain or very nearly attain grade placement in reading ability.

2. Measured over a period of years, the students of this remedial group retain the gain made during the instruction and seem gradually to develop increasing reading power as they grow older. This is indicated by the increase of reading grade equivalent when compared to grade placement.

3. There is some evidence to indicate that the students of low or average ability are not reading to their capacity and that they profit in larger proportion from intensive reading instruction than do the children who are reading more nearly to their capacity.

4. No attempt has been made to assay the gain in reading achievement due to each year of increased maturity, but in most cases the gain in reading achievement from year to year is greater than the accomplishment normally to be expected in this span of time. Giving increased maturity its just due, it seems fair to assume that some other factor is also operating.

5. Since general ability ratings are based upon a group test whose score is affected by reading ability, this is probably a factor which increases correlation between reading ability and general ability. With some exceptions there is close correlation between the two.

HOWARD V. FUNK

IDENTIFYING PATTERNS OF ABILITY

THE topic of this paper originated as a wish, on my part, and has been for several years a hobby with no particular professional necessity on my part, though it is certainly not alien to my interests as a teacher. It is concerned with one aspect of the interpretation of educational measurements,

the need to avoid obliteration of unique characteristics in students' scores such as may happen when part-scores are averaged. Imagine two students making equal scores on some such test as the American Council Psychological Examination. One of these students makes unusually high part-scores on the verbal sections, and low scores on the nonverbal parts, while the other student reverses the order of excellence. These highly significant differences are obliterated if we average part-scores and pronounce the two students equal. To average such measures is to assume that a dearth of the first ability can be fully equalized by sufficient measure of the second ability. Actually, the students are *different,* not equal. Each has his own "talents," and each has made his own adjustment to an environment, an adjustment conditioned by his particular talents.

Professor L. L. Thurstone spoke last fall before this convention on his new tests for such uncorrelated factors of ability. He said in part: "By these tests it is now possible to describe each individual in terms of at least seven indices which should replace the intelligence quotient, mental age, and other gross scores of general intelligence. . . . Each individual should be described in terms of a profile of mental abilities instead of by a single index of intelligence."

The potentialities of such a profile seem vast, especially if this profile represents a certain pattern of abilities which have undoubtedly influenced the whole adaptation of the individual. Not only the separate abilities, taken separately, but also the pattern of the interrelations between these abilities must have influenced the adaptation. Surely more than a casual glance at this profile will be necessary for its fullest appreciation. How, exactly, can "each individual be described in terms of a profile"? The profile does describe him, but this description is *implicit* in the profile, not *explicit.* The profile cannot be read casually.

If we could find one hundred individuals with identical profiles, we might expect to discover and describe the "practical results" of their common profile. Statistical method could

easily do more. It could give the probability that a hundred-and-first student appearing with this same profile would coincide with this "practical" description. But we should have to discover and study many such "homogeneous groups." Even after this, the chance that a new student's profile would be identical with one already studied would be small. The new student's profile would appear provokingly similar to many of the standardized profiles, yet identical with none. If it were possible to decide quickly *how close* this new profile is to each of the evidently similar standard profiles, we would be better off. We would at least have some basis for choosing a proximate description and some basis also for interpolating between the descriptions of near-by profiles. By interpolation I mean the estimation of a value somewhere in between known values.

Statistical method furnishes a concept and procedure to measure this degree of closeness in terms of the standard deviation between two such patterns. Let us follow custom and restrict our attention first to a test with only three subtests. The three part-scores of a student may now be represented by a point in a three-dimensional graph. Let us choose the lower southwest corner of the room as our origin. The first part-score tells us how far eastward to move. From here we move northward along the floor a distance equal to the second score, and then vertically for a distance equal to the third score, where we rest. If we choose a second individual with an equal average but different part-scores, our second terminal point will be in a different part of the room. The distance between these two points might be taken as a measure of the disparity between the two profiles. Whether we think in terms of distance or standard deviations, the computation is the same. The *standard deviation* is the statistician's *distance*. If we have a battery of six or seven tests we can no longer demonstrate the location of the point which uniquely defines the profile, but we can still calculate the *distance*.

The hobby mentioned earlier has included the designing and building of three working models to calculate this distance rapidly. The models work on three radically different princi-

ples, but all perform the calculations needed to give this distance. The four laborious steps in this computation are performed simultaneously by the machines, and the desired distance read on a scale. The data may be supplied by punched cards, and the corresponding distances read from the scale as these cards are fed through the device.

The question might be asked at this point: "Why must so many determinations of distances be made so rapidly, and why the machine?" In the first place, you will have already guessed that to find one hundred identical patterns for the standardization of even one group-profile is impossible in any available population of test-scores, though such a homogeneous group would delight any statistician — or *almost* any teacher. Children just are not that similar!

Might it not be, however, that commencing with a reasonably large total population we could find relatively large groups of profiles sufficiently close together to serve our purpose? Students' profiles are found to gather in groups, like their prototypes. True, the students would find themselves in Alice's predicament were they actually to change places with their profiles, into this multiordinal space. If we were to choose for standardization certain profiles from the most populous parts of the distribution, and then group together those profiles situated within a certain small and predetermined distance of one of these choices at a time, we would at least have approximated the homogeneous ideal. To locate those concentrations we must, of course, use "extra-sensory" methods —in this case mathematical. The density of population about any point could be determined with our calculating machine, by measuring the distance from the chosen point to every other point in the total population, and by correct interpretation of those distances. From these distances we could also select the points sufficiently close to the chosen point to represent it as a reasonably homogeneous group. Fortunately, this procedure can be considerably shortened by applying analytical principles, and further expedited by mechanical computation.

After a sufficiently large number of such homogeneous

groups have been isolated, and their prototypes studied in school, college, or in "real life," and their unique group-types of ability determined and described in realistic, functional, practical terms, it will be reasonable to suppose that interpolations can be made for profiles falling somewhere between several such predetermined standardized profiles. This is reasonable because the multiordinal graph in which we have located the points is mathematically continuous. Interpolation is justified by this principle of continuity provided only that the standardized profiles are not too far apart.

It is obvious, I hope, that this method offers a complete theoretical escape from the dangers of averaging dissimilar measures. All of the part-scores of a given individual are condensed into a single mathematical form, a coordinate point. This point conceals none of the peculiarities of the test-scores themselves, but can be treated as a single mathematical entity no matter how many values it represents as coordinates.

This ability to represent many concomitant measures as a single mathematical entity enables us to treat the profile as a unit—as a whole. If human abilities can be characterized with a certain degree of accuracy by seven uncorrelated indices, then the use of coordinates allows the study of the organism as a whole to a corresponding degree of accuracy. It does this, as has been intimated, by allowing homogeneous groups to be selected to represent some of the more typical profiles, and by providing for interpolation between numerically described characteristics of the various homogeneous groups. These characteristics are obtained not from the tests themselves. The tests formed a basis for the classification of individuals into significantly different groups. This is hypothetical, however, until the various groups are shown to be different in certain respects.

To state the proposition in another manner, the description of those properties and abilities found to be peculiar to one of these homogeneous groups—this description can be made in terms of the individual. The question, "How much has sub-

test number one contributed?" does not need to be asked. More especially we do not need to know exactly what aspects of this description are the contribution of a single test. These are questions confronting the test designer, but the interpreter of the test results can go beyond these because he has empirical evidence in his homogeneous group. In this respect the method is synthetic rather than analytical.

It may seem that the description of the homogeneous group has been taken too easily for granted. That is a somewhat different type of problem, however, and one which is receiving increasing and broadening interest and study. Many groups in colleges and universities are already under continuous objective scrutiny, and many different criteria are being applied. Those findings should help to solve this problem, and might in their turn be improved statistically by access to homogeneous groups for study. Of course, the investigation in real life presents far greater difficulty.

This reference to homogeneous groups is not to be confused with the classroom use of the phrase. In class the highest degree of homogeneity ever available is a rather compromising homogeneity with respect to a single test, or possibly with respect to some average of test-scores. Actually it is usually typified in a pretty "motley crew." It is more or less homogeneous for one more or less accurate measure, or for one very inaccurate average of fairly accurate part-scores. True homogeneity implies a high degree of similarity when compared with respect to all the variables at once. Such groups can exist, of course, only on paper, but even on paper such groups would seem to offer ideal material for many valuable statistical studies.

The method is not necessarily restricted to educational measurements. It would seem to offer promise in the diagnosis of mental difficulties whenever a sufficient amount of data in form of measurements becomes available. In many economic and sociological fields adequate measurements are already available. The evident ability of such a method in the study

of complexes of causative factors would seem to recommend it in those types of situation also. You will smile when you hear the method suggested for forecasting not only students but also weather. As a matter of fact, the two have something in common. A falling barometer means wind, and even this prediction involves several looks at the instrument. If more specific prediction is needed, more instruments must be used, and their readings studied in the light of similar readings from other parts of the country. Adequate prediction demands a system sufficiently flexible to handle many variables simultaneously. The daily weather map does this, and corresponds in a way to our many dimensional graph. Its information could be suitably studied if actually regarded as an aggregate of coordinate points in such a frame, and using the method of distances between points. The single point representing measurements would travel about through the imaginary frame from hour to hour. When it falls on a well-beaten path the weather to come can be predicted as similar to weather on previous days when that path was being used by the point in previous wanderings. The weather map, however, must be variously interpreted for various localities, and variously for farmers and aviators. The readings of the instruments—which could be shown as a profile similar to an educational profile—contain *implicitly* a description of the weather to come, but this can be made *explicit* only by a painstaking study of weather as associated with various types of meteorological profiles, and by efficient methods for classifying, coordinating, and interpolating.

Human abilities, human behaviors, are probably syntheses, just as today's weather is a synthesis of many contributing factors. But the weather is not predicted explicitly by merely publishing the daily readings of barometers, thermometers, and gauges. Professional interpretation is necessary. The larger the number of variables, the more difficult this task, and greater also the reward, whether it be in terms of information for the aviator or guidance for the growing child.

RICHARD G. SAGEBEER

A TENTATIVE ADMISSIONS POLICY

I SPEAK on the topic of "A Tentative Admissions Policy" diffidently and with a sharp sense of my lack of qualifications.

As I told Dr. Wood, our policy at Brooks has not been consistent; it has been experimental, and is, I suspect, designed to meet problems that may not be typical. My only justification for appearing before you is that we are trying hard, eager to learn, and possibly, being small and new, are better able to experiment than older and larger schools. Having said this I plunge into a brief statement of our problems and the facts which we have encountered in attempting to solve them.

First, then, a statement as to our situation. We have a six year school of 120 boys, beginning with the first form or seventh grade. Our curriculum is built up on a theory of long distance planning, so that what a boy studies in his lower school courses profoundly affects what he does later. For this reason we like to take the great bulk of our new boys into the first or second forms, seventh or eighth grades, and we have learned by experience that unless a boy is well taught and able, it is no kindness to him or to the school to have him come later than that. We are not geared to handle his problem.

We have a so-called waiting list, which we take to be the names of boys whose parents are at least interested enough to consider Brooks seriously. Our first step in admissions is to determine in the late fall how many of these parents really mean business. Therefore we send out letters to them all. Last year this resulted in the elimination of about a third of the list, a request for delay in making the decision from about another third, and definite requests for places from the remainder. These latter two groups of boys we ask to take our preliminary examinations, which last year came during the first week in March except in the cases of those schools which were members of the Educational Records Bureau and who, therefore, had cumulative records of the boys and who were planning their own regular testing programs at a later date.

Wherever possible we tried to meet the convenience of the secondary schools then attended by the candidates. I want to emphasize that where a cumulative record was available, we suggested the March tests but did not require them. The cumulative record gave us the information that we wished.

From our own point of view, even where cumulative records are not available, we should like to see the tests (and would be entirely willing to give the tests to our own students) in February, rather than March or April. I realize that many schools are opposed to this idea. But why? Especially if there is a cumulative record, why? The objections, as I understand them, are these:

1. Having the tests before April means that the students are not adequately prepared for them; it is too early in the year.

But as I understand it, the tests are not designed to be prepared for in the sense of ordinary examinations; they are comparative measurements of any one student's achievement and ability in terms of his contemporaries at any given time. If Jones in my school does less well in February than he would in April, the chances are that Smith in someone else's school will do correspondingly badly. The comparison of the two boys is just as valid, surely, in February as in April.

2. I am told that there is no advantage to be gained by having the tests earlier.

To this, in terms of our own experience, I must take strong exception. If tests are taken in April, the Bureau cannot get the reports out until well into May. It is a wonder to me that the work is done as swiftly as it is. If the tests could be taken in February, we should have the results in March. If we get them in May, there is no time for remedial work; little time for the parent whose boy we cannot take to search elsewhere; and even, in the case of our own already enrolled students, no time to get after weaknesses before the final examinations.

On the other hand, by getting results in March, even by getting results in early April, we can do these things:

a. We can determine with reasonable accuracy our own list

for the coming year, an important factor when in a small school there is a shortage of places. I have gathered that many other schools regard this as a form of devilish body snatching. I plead not guilty. By determining our list as early as possible before June, I submit that we do a kindness to parents, to secondary schools, and to ourselves, and that we in no way infringe upon the other preparatory schools. We acquire information that is definitely useful to the parents, to secondary schools, and to ourselves, and may be useful to any other school for which our tentative candidates may apply.

b. We can definitely help the parents. If a boy is clearly able or probably able, we can assure the parent that barring a complete collapse, we shall be able to take the boy in June if the parents still wish him to come. We do not accept a boy finally on the basis of his preliminaries; we simply give him reasonable assurance. If, on the other hand, a boy's I. Q. and achievement ratings show that he simply could not do our work, we can tell this to the parents in the winter, giving plenty of time to look elsewhere, instead of being caught very short in June. I submit this is a real kindness. Still further, if a boy shows promise but has some specific weakness, we can inform his parents and present school and give a real opportunity for special work before the final examinations.

c. We can definitely help the secondary schools by the methods mentioned.

I believe that most of you who have to cope with the admissions problem in one way or another would agree with me that having lists for the ensuing year pretty well lined up before that ghastly June rush is a consummation devoutly to be wished. We use, then, in the winter a scholastic aptitude test, usually the Otis, and an achievement test, usually the Metropolitan, though neither of these seems to me ideal.

Now we have a further specific problem in regard to admissions. We take roughly half our candidates in order from the list if they pass the various examinations; the other half on a purely competitive basis. It is clearly important to separate these sheep from goats as early as possible. Frequently

some of our best boys appear on the horizon in May. They are, of course, too late to take the regular preliminary tests. If a cumulative record is available, all is well; if not, we have to rely on the school records and the final examinations in June. We particularly want full and detailed information in regard to boys applying for scholarships, which are highly competitive, only awarded on an honor record and only re-awarded on the basis of an outstanding performance in the general life of the school.

Sometime in the spring we take our next step, which is to ask for a full transcript of a boy's record at his present school, with a confidential estimate of his ability and character from his headmaster or principal. Wherever possible, we ask to see the boy.

Finally, in the first week of June, we give the Secondary Education Board papers. As soon as these are corrected and the total data compiled, we write to parents either offering a place and sending a contract blank, or telling a parent that the chances of a place are dubious unless a chance vacancy occurs; or telling a parent that a boy definitely has not made the grade. I have been happy that in the last two or three years we have not had to do this latter except in a very few cases. In several instances, parents have expressed to me their appreciation.

We use, then, three kinds of data: the Educational Records Bureau tests, the school record, and the Secondary Board papers. So far as correlation with our own subsequent findings is concerned, by far the most reliable is still the opinion of the headmaster, principal, or teacher who has had the boy, *especially if we know the school and the person giving the opinion.* Next, on inadequate quantitative experience, I should place the Educational Records Bureau tests, especially *when we do not know the school or the person giving an opinion.* The tests do serve real purposes, do give real information; but they do not give the imaginative, creative type of mind a chance to show its wares, and they do not show what Arthur Millikan in a happy moment called workage or loafage. And

I think you will all emphatically agree that those two things, workage and loafage, are often all-important. The Secondary Board papers have the virtues and defects of the old type examination. We see what boys can do a job subjectively, who is neat, who is accurate, who can think, who has met our particular requirements. But we cannot always tell who has merely had good teaching and who is able but badly taught. Taking all the data together, we feel, not that we have an ideal admissions system by any means, but that we at least have the best scheme that we have yet tried.

May I repeat that we are gropers for the truth? Our accepted candidates should average a few more than twenty-five in the long run, and that is not many. But we are all groping; groping most of all for the best way to be fair and helpful to the individual boy; to ease the mutual burdens and responsibilities that fall upon us, whether we be parents, teachers in secondary schools, or teachers at the precollege level. That, I take it, is the only possible explanation of why we have come to this conference at all.

FRANK D. ASHBURN